

London	100.00	Paris	100.00	Frankfurt	100.00
Geneva	100.00	Brussels	100.00	Madrid	100.00
Amsterdam	100.00	Stockholm	100.00	Copenhagen	100.00
Oslo	100.00	Norway	100.00	Sweden	100.00
Denmark	100.00	Italy	100.00	Spain	100.00
Portugal	100.00	Greece	100.00	Japan	100.00
USA	100.00	Canada	100.00	Australia	100.00
New Zealand	100.00	South Africa	100.00	India	100.00
China	100.00	USSR	100.00	Other	100.00

World news Business summary

Poll gives support to French leaders

French public opinion appears to be rallying strongly behind President Francois Mitterrand and Prime Minister Jacques Chirac, according to an opinion poll published as fresh threats of violence against France were issued in Beirut.

Kosmos poised to acquire Bergesen

KOSMOS, Norwegian shipping, rigging and industrial group, seems set to acquire the Bergesen shipping and industrial group in what could be Norway's largest ever takeover deal. Page 21

Soviet-Israeli talks

Israeli Prime Minister Shimon Peres is likely to delay his return from the US today to meet Soviet Foreign Minister Eduard Shevardnadze in New York.

N-safety summit

Ministers from more than 100 countries meet in Vienna on Wednesday to try to agree tighter international rules for nuclear safety following the Chernobyl disaster. Page 9

Poles defy ban

Defying warnings by the authorities to keep religion out of politics, tens of thousands of Poles demonstrated support for the banned trade union Solidarity at a workers' pilgrimage attended by Lech Walesa in Czestochowa.

Sudan food flight

A C-130 Hercules transport chartered by relief groups is expected to fly food and medicines to the famine-stricken southern Sudanese city of Malakal this week, a United Nations spokesman said in Khartoum.

Expatriate apathy

Only 1 per cent of expatriate Britons have registered to vote in general elections with five and a half weeks to go before the October deadline. Page 8

Bombs rock Sri Lanka

A series of bombs set off by Tamil separatists rocked Sri Lanka's eastern city of Batticaloa despite the imposition of a 14-hour curfew. No body was hurt.

Pardons in Iran

Ayatollah Khomeini has relaxed the rules for pardoning political prisoners of opposition groups in Iran and told his designated successor that most of the women inmates in Tehran's main prison would soon be freed.

Gibraltar's fear

Gibraltar governor Sir Joshua Hassan said Gibraltarians fear being abandoned by Britain during the negotiation process with Spain about the future of the Rock.

Rubber bullets fired

Police in Pamplona fired rubber bullets and tear gas to disperse crowds protesting in the northern Spanish city against the expulsion from France of suspected Basque activists.

Anti-Nato protest

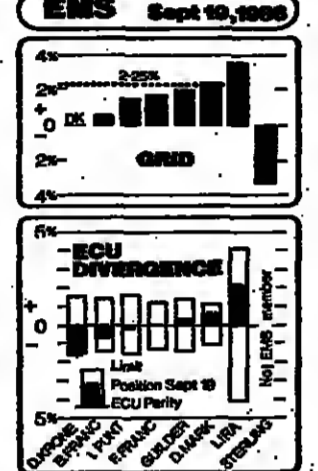
About 1,000 demonstrators daubed cars and buildings with paint as they marched to Amsterdam harbour to protest at the presence of 22 Nato warships.

Colonel shot dead

Colonel Ramirez Diaz of the Peruvian police medical service was shot dead on a Lima street, apparently by left-wing guerrillas.

Mansell's easy win

Britain's Nigel Mansell had a convincing victory in the Portuguese Grand Prix, putting himself within one race of the world drivers' championship.



The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rates from which no currency (except the DM) may deviate more than 2% per cent. The lower chart gives each currency's divergence from its central rate against the European Currency Unit (ECU), itself a basket of European currencies.

VENEZUELA will make a \$750m "down payment" to foreign banks starting in November as part of a \$2bn debt restructuring agreement signed in February, an official at the Venezuelan Finance Ministry said. Page 3

WORLD BANK said in its annual report that developing countries' hopes of accelerating growth fostered in the past year as economic activity in the industrialised world slowed. They now face a struggle to restore their economies and creditworthiness. Page 18; Details, Page 5

REGULATORY accord between US and Britain for securities and futures markets is due to be unveiled tomorrow. Page 18

HUTCHINSON Whampoa, Hong Kong-based conglomerate, confirmed that it had purchased 4.9 per cent of the Pearson group, which owns the Financial Times, and was negotiating about acquiring several parts of the group. A full bid for Pearson was ruled out. Page 22

SAGA Petroleum, Norwegian oil independent troubled by cash flow problems, is to seek NOK 533m (\$74m) of fresh capital from the market. Page 19

ASSICURAZIONI Generali, Italy's leading insurance group reported a 34.6 per cent increase in its 1985 consolidated net profit, to L54.2bn (\$241m). Page 19

COCOA ASSOCIATION of London, which groups producers, traders and manufacturers, has invited Ivory Coast, the world's biggest exporter, to become a member.

CHINA has given permission for Shanghai industrial centre to borrow money on international financial markets to speed growth. Guangdong Survey, Section II

We apologise to readers who did not receive Saturday's edition. This was a result of production difficulties in London.

EEC urges stable \$ and prepares to defend EMS rates

By Quentin Peel and Philip Stephens in GLENEAGLES, SCOTLAND

FINANCE Ministers and central bank governors of the 12 EEC member states agreed at the weekend on a united front aimed at persuading the US to stabilise the dollar's value and end current upheaval in the international currency markets.

The Gleneagles talks were marked by exasperation over US economic attitudes and policies, tempered by the realisation of a need for co-ordination to cope with the international economic uncertainty and the continuing debt crisis.

The finance ministers expressed anger and dismay at last week's apparent attempt by Mr James Baker, the US Treasury Secretary, to "talk down" the dollar in response to the West German Bundesbank's refusal to sanction a further cut in its discount rate.

Central bank governors meeting in the wings of the informal gathering at Gleneagles, the Scottish golfing resort, agreed on concerted action to defend the parities of the currencies in the exchange rate mechanism of the European Monetary System (EMS) when the markets reopen today.

Denmark in particular was adamant that there should be no devaluation of the Danish krone, which last week fell below its lower limit

Gatt includes farm trade, services in new round

By William Dullforce and No Dawmay in Punta del Este

A NEW round of multilateral trade negotiations - described yesterday as the most difficult and complex ever - will be launched before December 19.

The new round of talks under the General Agreement on Tariffs and Trade (GATT) will make a concerted attempt to bring agricultural trade within their scope for the first time.

The 22 GATT signatories, meeting in Uruguay last week, have also agreed that talks will now open on how to liberalise international trade in services, to define more clearly intellectual property rights and to seek rules on foreign investment.

Trade ministers of more than 70 countries agreed on Saturday to call an immediate halt to the growth in protectionism and to negotiate a reinforcement and expansion of free trade.

A ministerial declaration, hammered out last week, requires the establishment of a Trade Negotiations Committee (TNC) before the end of October. The aim is to complete the new round within four years.

Mr Enrique Iglesias, the Uruguayan chairman, said: "We have opened the way for the most difficult, most complex round, in GATT history."

This weekend's successful conclusion after almost two years of bargaining over the terms of a new round, will, it is hoped, reduce protectionist pressures in the US Congress and help to create a less tense climate in international trade.

At the moment the final deal was struck in the early hours of Saturday, Mr Clayton Yeutter, the US Trade Representative, hailed the agreement as "an excellent result for the US."

Similarly other groups, including the EEC and a dissenting Third

US and Moscow fail to set date for summit

By Stewart Fleming, US Editor, in Washington

MR GEORGE SHULTZ, the US Secretary of State, said yesterday that although the US believes a superpower summit is desirable, no date was set during his two days of talks with Mr Eduard Shevardnadze, Soviet Foreign Minister, on Friday and Saturday in Washington.

Interviewed on US television yesterday, Mr Shultz also made it clear, without explicitly spelling out the linkage, that the case of Mr Nicholas Demloff, the US journalist charged in Moscow with espionage, remains a major obstacle to a summit meeting. "It is most unlikely we could have a fruitful meeting in the conditions that exist today," he said.

Asked what he thought Mr Shevardnadze would tell Moscow about the talks, the highest level discussions between the US and Soviet Union in 10 months, Mr Shultz said: "I assume he will tell them there is a very strong determination here that Mr Demloff be released."

The US believes that Mr Demloff was arrested in retaliation for the US decision to arrest Mr Gennadi Zakharov, a Soviet employee at the United Nations, and charge him with spying. In comments by Mr Shultz and Mr Shevardnadze following the two days of talks, it appears that both sides are focusing attention on this aspect of the case.

Mr Shultz said yesterday of the arrest of Mr Zakharov and last week's decision to order the expulsion of October 1 of 25 members of the Soviet mission to the UN that "we are not going to tolerate the use of the UN mission as a way to spy on the US."

At a press conference on Saturday Mr Shevardnadze described the order as "unlawful" adding: "We will respond." Mr Shultz yesterday hinted strongly at US retaliation in response.

The 14 hours of meeting between Mr Shultz and Mr Shevardnadze have done little in public anyway to dispel the confusion surrounding US-Soviet relations at present.

On the one hand, there are the announcements from Stockholm and the heavy hints of progress at the arms control talks in Geneva, particularly on intermediate range missiles in Europe, which suggest a narrowing of differences on substantive issues.

Mr Shultz made it clear yesterday that in spite of the wranglings of conservatives that he restrict the agenda to the Demloff case, he had discussed a wide range of substantive issues.

Reagan hesitates to go for the big one, Page 17

East and West agree to cut risks of war

By Robert Mauthner in Stockholm

THIRTY FIVE nations representing all the Nato, Warsaw Pact and European neutral and non-aligned countries yesterday reached agreement on a significant series of confidence-building measures aimed at reducing the risks of war.

The agreement will obligate participants to give advance notice of all manoeuvres above the level of any army division, and, for the first time, force countries to accept on-site inspection of military activities both from the ground and the air.

As a result, countries will not be able to concentrate large military formations to threaten another state without prior notification or detection, as the Soviet Union did in its exercise on the Polish border in 1981.

The agreement, which only remains to be formally adopted at a plenary session today, was hailed as one of the most important breakthroughs in East-West relations for many years.

The agreement at the Conference on Confidence and Security-Building Measures and Disarmament in Europe (CSD) was reached after more than two and a half years of laborious negotiations in the first major East-West security pact since the conclusion of the Salt II agreement on Strategic Arms Limitation in 1979.

While confidence building measures such as the notification of ma-

Rover may offer UK car plant to Honda

By Arthur Smith in Birmingham

BRITAIN'S state-owned Rover Group is considering making a plant at Cowley, Oxford, available to Honda of Japan for assembly of its cars for sale in UK and other European markets.

Mr Graham Day, chairman and chief executive of the Rover Group, formerly BLM, is reviewing the operation of the Austin Rover vehicle cars subsidiary. His review is believed to call into question the future of Austin Rover's south assembly works at Cowley, which produce the Maestro and Montego models.

The Honda option is one possibility, with Honda taking a small equity stake either in the Rover group or in a specially created joint company using the Cowley site.

Honda has already acquired a 330-acre site nearby at Swindon to establish an engine plant. Use of the Cowley assembly facilities would give Honda a low-cost route to compete against Nissan of Japan, which this month announced plans to go ahead with the second phase of its UK assembly plant to produce cars at the rate of 100,000 a year by 1991.

Mr Day will want to explore all options before presenting the Rover Group corporate plan to the Government towards the end of this year. But the Cowley works has already emerged as potentially surplus to requirements.

Mr Day disclosed part of his thinking when he told the West Midlands Confederation of British Industry that Austin Rover would have a battle to hold on to its present market share of 15 and 17 per cent. It was not foreseeable for any UK-based assembler to increase market penetration dramatically within a couple of years.

Austin Rover, with capacity to build 750,000 cars a year, must on recent experience reconcile itself to building about 450,000.

Continued on Page 18

De Larosiere will resign early as IMF managing director

By Stewart Fleming, US Editor, in Washington

MR JACQUES DE LAROSIERE, the managing director of the International Monetary Fund (IMF) for the past eight years, will announce his resignation at the annual meetings of the IMF and World Bank next week, officials confirmed yesterday.

This news immediately set off speculation about his successor.

The head of the IMF by tradition is a European. The front-runners for the post are thought to be Mr Lamberto Dini, deputy governor of the Bank of Italy, and Mr Onno Ruding, the Dutch Finance Minister and chairman of the IMF's policy-making interim committee.

Senior officials at informal talks of European Community finance ministers and central bankers, held at Gleneagles in Scotland, said that Mr Ruding had emerged as an early favourite.

The officials said that it was too early for governments to make a definite offer to the Dutch minister, as other contenders might emerge. Mr Ruding's performance at the annual meetings would be watched closely.

There has been intermittent speculation since last year's annual meetings in South Korea that Mr de Larosiere might decide to leave the Fund before his current term of office expires in June 1988. The election of a conservative Mr Jacques Chirac as Prime Minister in France was seen as possibly presenting the IMF head with an excellent opportunity to return to public life in France.

But several other factors may also have played a role in his decision.

The IMF is shortly to embark on negotiations with member governments for a new increase in its financial resources. The talks are expected to be difficult, and Mr de Larosiere's managing term of office would not be long enough to allow him to see the process through to its conclusion.

Moreover, both the IMF and its sister institution, the World Bank, are entering a new phase in their handling of the world debt crisis. In the case of the World Bank a new president, Mr Barber Conable, has already taken office. Given the closer co-ordination between the bank and the Fund which is envisaged under the proposal of Mr James

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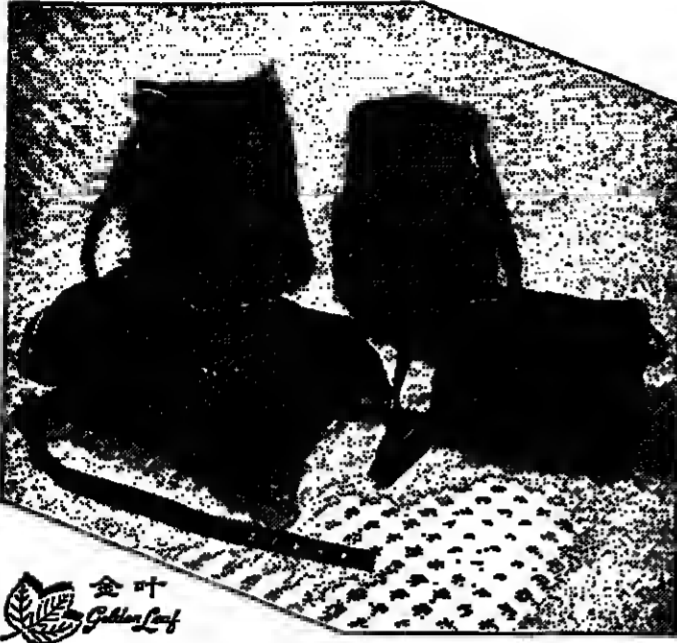
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Computer services Survey	Section III

OVERSEAS NEWS

中國安徽

"GOLDEN LEAF" Canvas Bags



"Golden Leaf" Brand canvas bags from Anhui, China, are made of top quality 100% cotton canvas. Of exquisite colours, they are available in all sizes and in a wide variety, including school bags (single and double belt type), hand bags, rucksacks and bags for mountaineers.

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Cereals, Oils and Foodstuffs From Anhui

Located at the drainage area of the Yangtze River and the Hui River and with favourable natural conditions such as fertile soil, mild climate and abundant rainfall, Anhui Province is particularly rich in its agricultural by-products and



native produce. Anhui Branch of China National Cereals, Oils and Foodstuffs I/E Corp. is experienced and strong in foreign trade because we have handled our own import and export of cereals, oils and

foodstuffs since 1976. The export volume of our corporation ranks first among all I/E Corps. in Anhui Province. At present, we export over 161 kinds of products involved in 9 categories. They are cereals and oils, all products, meat and meat products, egg products, canned goods, aquatic products, sundry goods, fruits and vegetables. These products are exported to over 30 countries and regions in the world such as Hong Kong, Macao, Singapore, Malaysia, Japan, USA, Canada, USSR, Eastern and Western Europe, Middle and Near East, Oceania, Africa and Latin America. We have established good trade relations with over 400 companies in these regions.

In addition to foreign trade business, Anhui Branch of China National Cereals, Oils and Foodstuffs I/E Corp. is also active in importing technology and developing



compensation and better trade with foreign partners.

We wish to keep close contact with friends in the trade circles all over the world and we are at your service at all times.

China National Cereals, Oils & Foodstuffs I/E Corp., Anhui Branch
Import and Export Building, Jinzhai Road, Hefei, China
Tel: 60484, 60568 Cable: "CEREALFOOD" Hefei Telex: 90020 ABLYS CN

Italian markets fear tax on shares

By John Wyles in Rome

ITALIAN STOCK markets are likely to open today in a state of extreme nervousness about trends in government fiscal policies following Friday's highly unexpected decision to tax interest paid on treasury bills and certificates.

The move, which was apparently agreed within the coalition government a fortnight ago, is being seen as another political coup for Mr Bettino Craxi, the Socialist Prime Minister.

Therefore on the Milan stock market, whose capitalisation has more than doubled this year, there is an urgent desire to know the Prime Minister's thinking about a capital gains tax on shares. This is the other key tax reform at the centre of a clamorous campaign mounted by the Socialist and Communist parties.

The market's initial fears were reflected in its 2.77 per cent fall on Friday after news broke of the government's decision.

Mr Renato Altissimo, the Liberal Party leader, said at the weekend he would be seeking an assurance from Mr Craxi that the government would not take aim at capital gains.

Most analysts agree that the new tax, 6.25 per cent until October 1 next year and then 12.5 per cent, will not greatly affect the government's ability to finance its enormous public sector deficit.

However, a key test will come this Wednesday when the treasury will issue L18,500bn of short-term bills. They are being sold at nominal interest rates which are slightly higher than recent issues. But their after tax yield will be no more than 28 basis points lower.

It is argued that this amounts to only a modest reduction in the relatively high level of Italian real interest rates of 4-5 per cent and should not seriously diminish the attractions of government securities.

More than 60 per cent of the Government deficit is financed with short, medium and long-term treasury issues and around 50 per cent of government obligations are purchased by private domestic investors.

The political gain for Mr Craxi lies in the fact that having campaigned successfully for a tax, the Socialists have been made to appear the most potent force within the government.

Terror attacks rally public behind French leaders

BY DAVID MARSH IN PARIS

FRENCH public opinion appears to be rallying in support of both President Francois Mitterrand and Mr Jacques Chirac, the Prime Minister, in the wake of the wave of terrorist attacks in Paris.

Signs of closing of political ranks, coinciding with fresh threats of violence against France made in Beirut at the weekend, come in spite of lack of any concrete breakthrough by French police to bring to justice the authors of the past fortnight's attacks.

With security stepped up visibly in railway stations and on the streets, Paris enjoyed a tense but sunny and terrorist-free weekend.

Expecting that the break after the bloody bomb attack in the Montparnasse district of Paris on Wednesday might be only temporary, the so-called Solidarity Committee calling for the release of Middle East prisoners stepped up its warnings at the weekend.

In communiqués issued in Beirut, the Committee said its "fire" would be extended unless three prisoners held in France were released.

Anti-terrorist experts believe the perpetrators of the terrorist attacks might be planning to strike in other countries such as the US and Italy, or to extend their action to the French provinces.

President Mitterrand, who consulted with Mr Chirac immediately on his return from a state visit to Indonesia on Friday, convoked on Saturday



Mitterrand—under pressure

a top-level security meeting at the Elysee with the Defence and Interior Ministers and the head of the French secret service.

Mr Chirac repeated France's determination not to give in to blackmail.

An opinion poll at the weekend indicated a sharp rise in public support for both France's political leaders during the latest period of terrorist attacks, with the crisis apparently soothing strains in political cohabitation between the Socialist President and his right-wing Prime Minister.

The poll published yesterday by the Journal du Dimanche newspaper indicated that Mr Mitterrand's support ratio had risen six points over the last

month to 57 per cent with Mr Chirac gaining seven points to 47 per cent.

Socialist Party leaders, consulted by Mr Chirac in an attempt to unite the nation's forces against terrorism, have on the whole been giving the Government support over the past few days.

However scepticism over the Government's security policies is likely to grow unless the police can come up shortly with firm evidence of counteraction.

The police still believe the family of Mr Georges Ibrahim Abdallah, the alleged terrorist leader held in a French jail, carried out recent attacks designed to secure his release, in spite of the well-publicised presence of his brothers at their home in northern Lebanon at the end of last week.

The uneasy calm in France coincides with an upsurge in tension over the French presence in Lebanon.

Lebanese forces in Damascus under the Popular Front for the Liberation of Palestine (PFLP) of Dr George Habash yesterday denied allegations that it was involved in the recent Paris bombings and denounced the attacks as "atrocities."

The statement quoted Colonel Abu Ahmad Fouad, commander of the PFLP forces as denying that Abdallah had anything to do with the PFLP. It also denounced the attacks against Unifil in South Lebanon.

Israel rejects UN charges

BY ANDREW WHITLEY IN JERUSALEM

ISRAEL HAS angrily rejected United Nations charges that its continued presence in southern Lebanon is responsible for the recent spate of violence in the region, including the deaths of four French peacekeeping soldiers.

Mr Yitzhak Rabin, the Defence Minister, said yesterday that attacks on the 5,800-strong force drawn from eight nations were prompted by an internal struggle within the Lebanese Shi'ite community and were not connected with Israel in any way.

Over the weekend, Mr Shimon Peres, Israel's Prime Minister, met Mr Perez De Cuellar, the United Nations secretary-general, in New York to discuss

the increasingly precarious positions of the Unifil forces in Lebanon.

Earlier, the secretary-general had warned that the UN Security Council may have to withdraw the force—deployed in the region since March 1978—if progress were not made soon in compelling Israel to withdraw back to the international frontier.

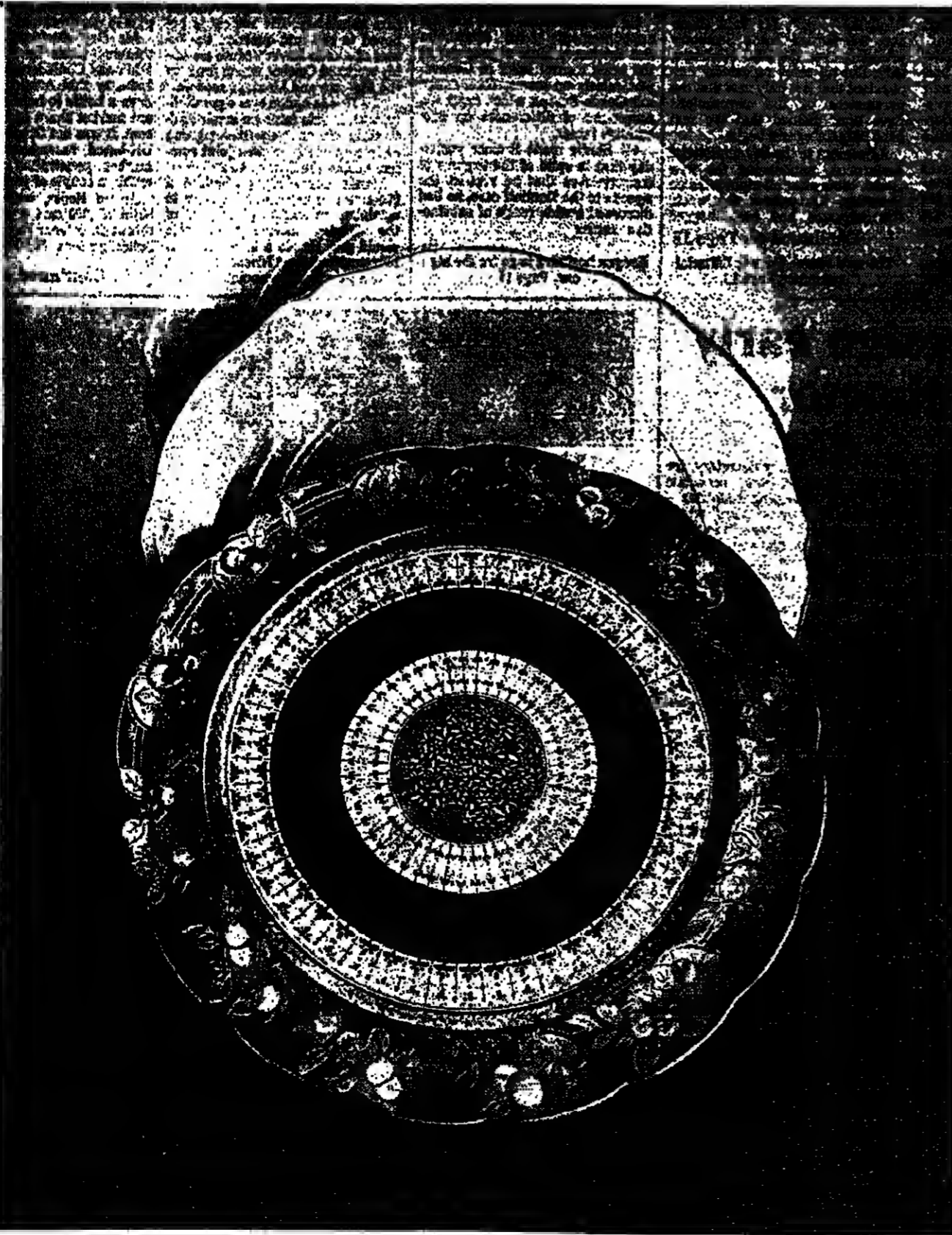
Speaking after yesterday's regular cabinet meeting in Jerusalem, Mr Rabin rejected outright any possibility of Israel permitting Unifil to deploy down to the border, in the "security zone" currently occupied by Israeli forces and their allies, the South Lebanon army.

He was echoed by Lieutenant-General Moshe Levy, Chief of Staff of the Israel Defence Forces, who described the UN demand as "a cover to avoid the real issue."

General Levy said Unifil had become trapped in Lebanon.

Mr Rabin confirmed that Israel is to step up its assistance to the SLA, to whatever levels were necessary to help the Christian militia fight off its opponents.

Other aids from the UN: Mr Shimon Peres, the Israeli Prime Minister, and Mr Eduard Shevardnadze, the Soviet Foreign Minister, will meet today at UN headquarters, an Israeli spokesman said yesterday.



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OVERSEAS NEWS

Bonn ready to legalise private Ecu investment

BY QUENTIN FEEL IN GENEVA

THE WEST GERMAN Government is ready to legalise private investment in Ecu...



Mr. Gerhard Stoltenberg

That assurance was given at the weekend by Mr. Gerhard Stoltenberg, West German Finance Minister...

Mr Stoltenberg's statement, confirmed by senior West German officials...

The pre-conditions laid down by Bonn are that those member states...

Mr Stoltenberg was careful to respect the staunch independence of the Bundesbank...

He also did not insist that the West German move be linked to the British Govern-

UK likely to maintain contacts with ANC

By Michael Cassell, Political Correspondent

THE BRITISH Government is expected to maintain its contacts with the African National Congress (ANC)...

After the talks, the Foreign Office said that a dialogue between the two sides was now expected to continue...

The British Government has been reluctant to talk to the ANC because of its refusal to reject violence...

Mr Tambu did not see Sir Geoffrey during his two visits to southern Africa in July...

Sir Geoffrey used Saturday's meeting to underline the wish of British and EEC governments to see a quick and peaceful end to apartheid...

The ANC leader welcomed the government's demands for the release from prison of black leaders...

Binding Stockholm accord boosts peace hopes

THE AGREEMENT reached in Stockholm yesterday at the 35-nation Conference on Confidence and Security-Building Measures and Disarmament in Europe (CDSB)...

Though it does not include any arms control measures proper, and does not provide any absolute guarantee that future wars will be prevented...

The agreement is a substantial improvement over the confidence-building measures contained in the 1975 Final Act of the Helsinki Conference...

of the Helsinki Conference on Security and Co-operation in Europe, of which the CDSB is an offshoot...

The Stockholm agreement applies to all significant military activities which take place in Europe...

Finally, the latest agreement is verifiable thanks to an effective inspection system...

The following are the main provisions of the Stockholm agreement:

Robert Mauthner spells out the details of the East-West agreement reached yesterday

Notification: All significant military activities involving more than 12,000 troops...

Annual calendar: All the participants are required to exchange by November 15 of each year a list of significant military activities...

Inspection and verification: The agreement provides for ground and aerial inspection to verify compliance with the commitments...

advance. Failing this, they are prohibited. Activities involving 40,000 troops or more up to the level of 75,000 should also be announced two years in advance...

So-called military "alerts," under which troops are called out without notice for short periods to test their preparedness...

Observation: Signatory states are required to invite observers from all other participating states to attend military activities involving 17,000 troops...

Inspection and verification: The agreement provides for ground and aerial inspection to verify compliance with the commitments...

up the conference in its latter stages and forced it to be extended, was finally solved by a formula under which the inspected state effectively has the last say...

Any state has the right to enter the territory of another state to determine whether a military activity fails to meet the obligations of the agreement...

Non-use of force: The participants reaffirm their commitment to refrain from the threat or use of force against the territory or political independence of any state...

The binding agreement comes into effect on January 1, 1987.

Canada lifts budget deficit target

BY BERNARD SIMON IN TORONTO

A SLOWING economy and rising official support for hard-pressed energy and grain producers have forced the Canadian Government to raise its budget deficit target for the current fiscal year...

Mr Michael Wilson, Finance Minister, told a meeting of business and civic leaders in Toronto that the deficit in the year to March 31 1987 was likely to rise from the original estimate of C\$2.95bn (E14.5bn) to C\$3.5bn.

He said Ottawa remained committed to achieving "sizeable" year-on-year cuts in the deficit. The shortfall in 1985/86 was C\$34.5bn.

Canada's budget deficit, equal to more than 7 per cent of gross domestic product last year, is proportionally among the highest in the industrial world...

US dollar eased pressure on the Canadian currency both before and after Mr Wilson's announcement.

The Canadian dollar traded at around 72 US cents last week following a five-point increase in the bellweather Bank of Canada rate on Thursday to 8.63 per cent.

Mr Wilson ruled out further tax increases or spending cuts to restore his original deficit target.

He said Ottawa remained committed to achieving "sizeable" year-on-year cuts in the deficit. The shortfall in 1985/86 was C\$34.5bn.

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Mr Wilson ruled out further tax increases or spending cuts to restore his original deficit target.

Venezuela to repay \$750m principal to foreign banks

BY JOE MANN IN CARACAS

A HIGH official at Venezuela's Ministry of Finance said this weekend that the government will make a "down payment" of \$750m (E507m) to foreign banks starting in November...

Mr Jorge Marciano, the Ministry's Director of Finance, made the announcement on his return from meetings with foreign bankers in New York...

Mr Marciano's statements apparently put an end to uncertainty over the Venezuelan Government's intention to actually make this principal payment in light of a reduction in oil income this year estimated at over \$5bn.

from meetings with foreign bankers in New York. He also said the payment would be made in stages.

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Socialist vote falls in Austria

AUSTRIA'S ruling Socialist Party saw its vote decline sharply in elections to the Provincial Parliament of Styria yesterday, the last major test of public opinion before the general election in November...

According to preliminary results, Socialist support fell by an average of about 5 per cent to 37.6 per cent of the vote, compared with 42.7 per cent in the 1981 elections.

The conservative People's Party retained its absolute majority, increasing its share by 1 per cent to 31.9 per cent.

The various "green" lists, standing for the first time in the provincial elections, appear to have done best, winning about 4 per cent of the vote.

Swiss GDP up by 2.7 per cent

BOOMING demand for capital goods fuelled a further growth in the Swiss economy in the second quarter, according to a Government report from Bern...

Gross domestic product was up 7.5 per cent in nominal terms, or by a real 2.7 per cent, in comparison with the same period of 1985.

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Table with 2 columns: 1985 and 1986. Rows include Earnings (loss) before extraordinary items, Extraordinary items, Net loss, Earnings (loss) per share, Before extraordinary items, Net loss.

The deficit on extraordinary items arose from payments of US\$1,905,000 (1985: US\$1,194,000) made to De Beers Consolidated Mines Limited relating to obligations in respect of Botswana BSL Limited (BRST) and its subsidiary, BCL Limited (BCL)...

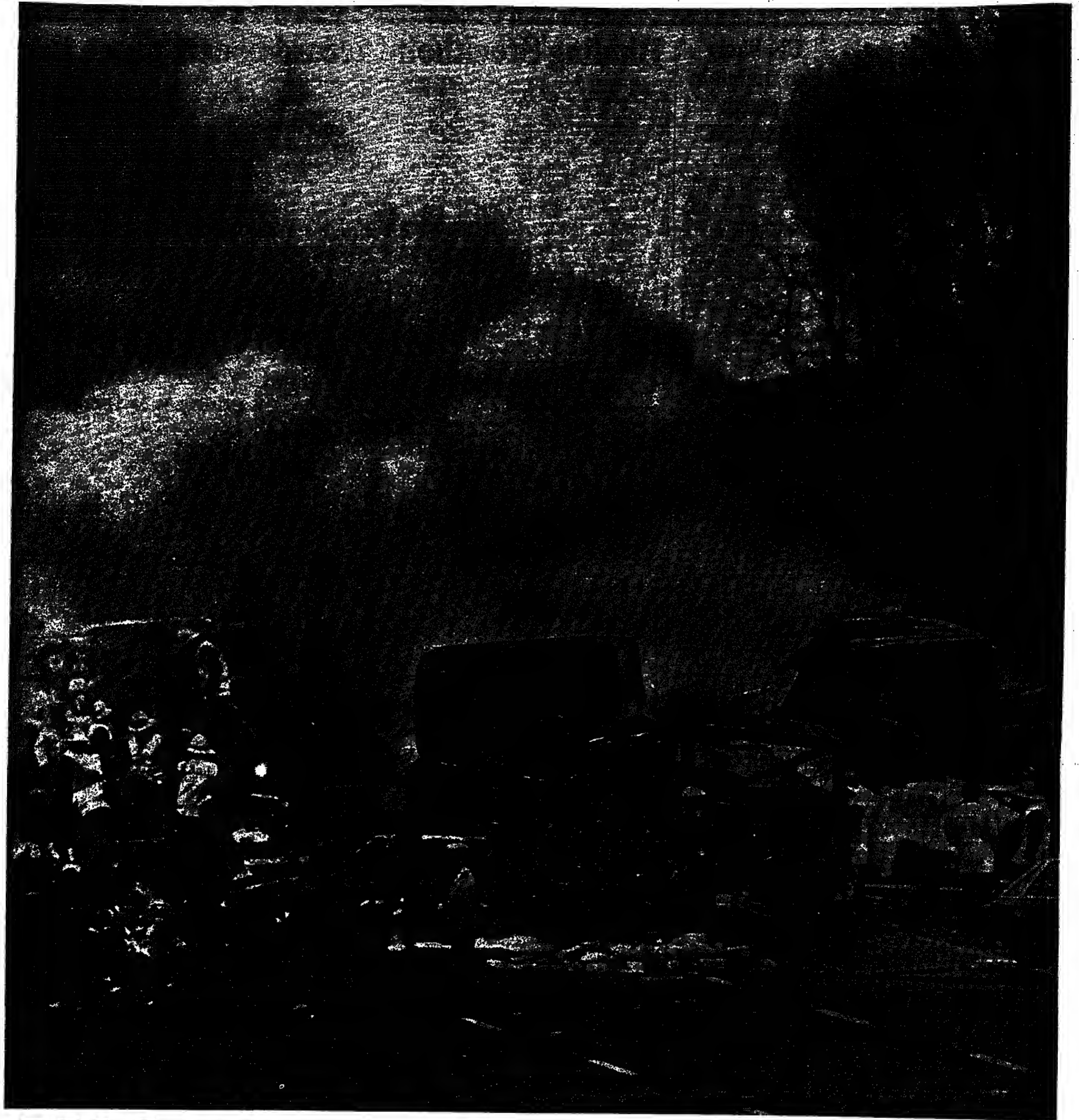
The directors have not declared a dividend in respect of the financial year ended June 30, 1986.

The Corporation's principal investment is a 27.3% interest in Zambia Consolidated Copper Mines Limited (ZCCM), whose results for the year ended March 31, 1986 are given below. No dividends were declared by ZCCM.

Table with 2 columns: 1986 and 1985. Rows include Copper production (tonnes), Copper sales (tonnes), Average copper proceeds per tonne (kwacha), Total sales (kwacha millions), Earnings before tax (kwacha millions), Net (loss) earnings (kwacha millions).

The annual report at June 30, 1986 will be posted to shareholders on or about October 14, 1986. Copies may be obtained from the UK Transfer Agent: BHL Samuel Registrars Limited, 6 Grosvenor Place, London SW1P 1PL.

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MANAGEMENT

EDITED BY CHRISTOPHER LORENZ

Drexel Burnham Lambert

A highly persuasive dealer in 'junk'

David Lascelles continues this series with a look at the trend-setting US investment bank

IN THE walter of new ideas that has poured out of the financial services industry in recent years, few have proved as controversial—or for that matter as memorable—as junk bonds. And few have been as closely identified with a single financial institution, in this case Drexel Burnham Lambert, the Wall Street investment firm which built up the market for low grade corporate paper virtually single-handedly in the late 1970s.

Today, the junk bond market is worth over \$100bn, and most of Drexel's major competitors which originally turned their backs on it have moved in. The Federal Reserve Board has even conferred on it a distinction of sorts by issuing a regulation designed to curb the excessive use of junk paper to finance takeovers and buy-outs—the business, in which Drexel has excelled by arranging deals for go-getting clients like Rupert Murdoch and Sam Sheinberg.

Junk bonds have enabled borrowers outside the ranks of the US blue-chip companies to raise extremely large sums of money (many Drexel deals have been in the billions of dollars) from investors attracted by their higher yields and a default rate which, Drexel managed to persuade them, was a lot lower than people expected.

In fact Drexel's greatest achievement is not so much in setting up junk bond deals, as in building up a list of investors willing to buy them, mainly specialised mutual funds, insurance companies and oddball savings institutions with an appetite for good returns. This has made possible deals which would be inconceivable using conventional financing techniques, like the record \$4.5bn buy-out of Beatrice, the US's largest food company, for which Drexel arranged a \$2.5bn financing.

Despite the arrival of new competition, Drexel still claims to account for over half the new junk bonds issued, and makes markets in 1,000 existing issues, most of it handled by a formidable trading team in Los Angeles whose working hours are something of a legend. Whether staff there do actually start work at 4 am, as frequently alleged, is hard to check since Michael Milken, the



man credited with setting up the junk bond market, does not give Press interviews. But he is usually at his desk when Wall Street opens up at 9 am, despite his three-hour time lag.

He moved his team out there in order, it is said, "to extend his work day," and take advantage of the more dynamic, free-wheeling atmosphere of California, which is his home state. The fact that Drexel is now split between the east and west coast does not appear to affect the business much.

Milken had made a special study of "fallen angels," the bonds of previously high-quality companies, when a student, and concluded that the higher returns they gave investors more than outweighed the risk of default in a well-diversified portfolio. The opportunity to put his ideas into practice came when Burnham and Co bought Drexel Firestone, the Philadelphia firm where he started out, in 1973.

Aside from his energy and highly developed powers of persuasion, Milken evidently owes his success to an ability to apply junk bond techniques to deals that are complex, or extremely large, or often both. Such is his charisma now, though, that his name alone will usually be enough to get a deal off the ground.

The astonishing success of junk bonds has helped transform Drexel from a middling Wall Street house into one of the fastest-growing and most profitable firms in the business—a change symbolised by its forthcoming move from rather scruffy offices beside the New York stock exchange to spanking new quarters by the Hudson River. Its capital has grown sevenfold since 1981 to \$1.5bn which makes it one of the largest on Wall Street, and it is

DREXEL has a unique ownership structure among the large Wall Street houses which, it claims, gives staff special motivation.

While some of its competitors have gone public (as in the case of Goldman Sachs, stayed a partnership), Drexel is employee-owned, and determined to remain so.

The largest shareholder is Groupe Bruxelles Lambert, the Belgian financial services group which has 26.5 per cent. But GBL's stake is being steadily whittled down because Drexel can issue up to 5 per cent of new shares to its staff every year before being obliged to offer new ones to GBL.

About 1,600 of the firm's 8,600 employees are shareholders. The price of the

shares is determined by Drexel's book value which went up 73 per cent last year. But the shares are not tradeable—holders can only cash them in when they leave or retire.

So even though Drexel's soaring profits have made many of them millionaires, their worth is in the form of paper rather than cash in the bank.

"We are a highly capitalistic firm, but this makes us rather socialistic," says Fred Joseph, the chief executive. Shareholders receive reports of Drexel's financial performance which are not made public, including the true profits. But they are bound to keep the information confidential. "I'd be very disappointed if someone leaked them," says Joseph.

now hiring new people at the rate of 150 a month.

"Investment banking is not a easy business," says Fred Joseph, the firm's chief executive, a noticeably quiet-spoken man (for such a hard-driving firm) who occupies a corner office cluttered with mementoes, with a trolleyful of pastries and beverages permanently parked at one side to nourish frequent staff meetings. He and Robert Linton, the firm's chairman, have managed Drexel's rocketing fortunes to a large extent by getting hold of people who they think have talent and letting them get on with it. "We have no organisation chart here. I wouldn't allow one," says Linton.

Drexel is proud of its loose management structure. There is a brief management meeting every morning. But Joseph says simply: "My job is to get the right person in a key position, and then let him have the people he wants." To prevent anarchy, though, Joseph believes in the need for constant communication. His diary has several entries marked "WA" for days when he goes for a "walk-about," chatting to employees all round the firm.

Joseph, who is a Harvard MBA, started out in Wall Street with E. F. Hutton and joined Drexel in 1974 to head its corporate finance activities. It became chief executive in May

last year.

Like an actor who soars to success in a starring role only to get type-cast, Drexel's achievements have become a bit of a handicap. Its recent record may be a classic example of a company spotting an opportunity and exploiting it ruthlessly to great effect. But outside the confines of Wall Street, Drexel is known for little else than junk bonds, a product whose name also does little to enhance its upstart image. And even on Wall Street itself, Drexel's scrappy manner and refusal to invite others into its deals has won it few friends, and made it something of an odd man out among the half dozen largest firms.

The Dennis B. Levine affair earlier this year when one of its senior staff was accused of trading securities on inside information, gave it a further image problem. Even though the main allegations covered dealings that took place before Levine joined Drexel, and Drexel itself took steps to tighten up internal discipline because of it, the most charitable view on Wall Street was that Drexel's hectic pace made it sloppy about who it recruited.

"It gave others an excuse to dump on us," complains one staff member.

All told, this means that even while they are earning some of the biggest profits in investment

banking, Drexel's executives have plenty to concern them, not least, one suspects, a craving for greater status on Wall Street, despite all the fighting talk. They do not, for example, like to call them junk bonds at Drexel. "We prefer the name high yield bonds," says Jim Balog, the vice chairman, whose main task has been to fend off the many threats of legislative action that Drexel's financing of hostile takeovers has drawn from angered state governments.

Although Drexel rates as a "major bracket" firm, meaning it gets its name in a special high slot in "ombustones" announcing financing deals, it has not been admitted to the exclusive "bulge bracket" of top notch firms like Merrill Lynch, Salomon Brothers and Goldman Sachs. If this rankles, the firm's senior managers do not show it. "I'd rather be a bulge profit firm than a bulge brackets firm," says Linton, who argues that investment banking's best markets lie with vigorous new companies who need to raise finance, rather than with glamorous blue chip ones who are either in decline or so cash-rich that they are buying back their securities, not issuing new ones.

But even though Drexel believes the junk bond boom is far from over, it has been careful to redeploy its enormous earnings from that business to develop large dealing operations in government bonds, mortgage-backed securities and equities, and hire top corporate finance names from other firms to make its mark in that field as well. In addition, it has a well-established commodities business, though it has suffered from the slump in commodity prices, and was recently forced to write off \$35m in losses from the tin crisis.

All told, non-junk bond business now accounts for about three quarters of Drexel's revenues, according to Joseph, who claims that Drexel would still rank among Wall Street's five largest investment firms on that score alone.

However, the concentration on junk bonds—which is a domestic US business—has left Drexel some way behind its main rivals on the international scene. "We can't grow at 200 per cent a year. A 100 per cent



Robert Linton (left) and Fred Joseph finding people with talent and letting them get on with it

is enough," says Joseph. But overseas expansion is to be the next big drive, particularly in the UK and Japan where Drexel already has offices.

Although the firm is applying to join the London stock exchange, it has decided not to buy a UK stockbroking firm or become a dealer in UK government bonds for the time being, preferring to wait and see.

Although the exportation of the junk bond concept would seem the logical spearhead for Drexel's attempts to "go global" the firm does not expect foreigners to take to it readily—which is another reason for diversifying into more conventional areas like corporate finance and convertible bonds.

"It took 10 years to educate people here. It will be slower abroad," says Joseph, who also believes that the Euromarkets, accustomed as they are to dealing only with top quality borrowers, are not structured for junk bonds. The Japanese are beginning to show interest though, and Milken is off to Tokyo this autumn to deliver the message to investors there. Drexel might also apply junk bond techniques to Third World debt as a way of stimulating a secondary market for sovereign

that is not unrelated to high yield bonds," comments Joseph. Drexel has hired some people with banking experience to look into this possibility.

The big question hanging over Drexel's future is whether it can keep up the pace and still remain private. Joseph has been adamant that Drexel does not need to follow other firms on to the stock market to raise capital, partly because the firm is making such huge sums of money. It also fobbed off an approach from the General Electric Credit Corp which eventually bought Kidder Peabody instead.

At the middle of this year, Drexel was also running neck and neck with Goldman Sachs in terms of capital size (they were both around the \$1.5bn mark, and by far the two largest private firms in the business). Since then, though, Goldman has added a further \$500m through its new partnership with Sumitomo Bank of Japan. Although this puts Drexel back, Joseph says it "does not change our views one iota. We are not in a capital race. We are in an earnings race and in an attract-good-people race."

The first article in this series appeared on September 8.

Management abstracts

Maintenance management. J. Cecil-Wright in *Management Accounting* (UK), May 88 (2 pages)

Examines the influence of new manufacturing technology and lower stocks on managerial attitudes to plant maintenance, now seen to be crucial in ensuring that critical machines have maximum possible uptime. Looks at conditions essential to effective maintenance—pre-training and re-training of managers and technicians, pre-training by equipment suppliers, review of suppliers' spares recommendations, and involvement of staff in machine installation and hand-over. Career paths in tomorrow's organisation. G. Stamp in *Industrial and Commercial Training* (UK), Mar/Apr 88 (5 pages)

Describes an approach to selection and appraisal of individual potential, called path appreciation. It is based on Elliott Jacques' theory of time-span of discretion, in which the level of organisational responsibility is related to the time dimension along which it is exercised. Explains the process of career path appreciation which comprises three parts compressed into a single interview, and a fourth—career path mapping—carried out jointly by management and the individual. Offers three case examples to illustrate the practical potential and achievement claimed for the technique.

Middle-out development of marketing strategy. P. J. Boxer + J. R. C. Wensley in *Journal of Management Studies* (UK), Mar 88 (16 pages)

Examines the limitations of both the top-down and bottom-up concepts of product/market strategic planning, and concentrates on the benefits that a middle-out marketing view of the relationship between the business and its customers can provide. Considers it will be dependent upon new forms of remuneration, informational support, and performance evaluation for middle managers. Retailing presentation. C. Davies in *Designers' Journal* (UK), May 1986 (7 pages)

Explains why leading retail chains are giving more attention to store design and the presentation of goods; focuses on Woolworth, Deols, and W. H. Smith, and illustrates their product displays in colour.

These abstracts are condensed from the abstracting journals published by *Author Management Publications*. Licences copies of the original articles may be obtained at a cost of £4 each (including VAT and p+p) cash with order from Author, PO Box 22, Wembley HA9 9NU.

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Italy: (02) 923691, Netherlands: (20) 5471891, Norway: (02) 246090, (06172) 4000, Mediterranean and Middle East: Athens 662881.

UK NEWS

Short list for airborne warning system expected

BY DAVID BUCHAN

THE UK Government is likely to announce this week a short list of British and US companies still in the running to supply it with an airborne early warning (AEW) system, but it may not decide the winner for several weeks.

The competition for this prestigious but fraught contract stems from the government decision in March to give GEC of the UK six more months to show it could salvage the Nimrod AEW programme which has so far cost more than £300m in public money, and at the same time to invite rival offers.

Seven UK and US companies submitted tenders to the Defence Ministry on July 7. They included GEC, which is fighting to keep its contract and, for the first time in nine years of developing Nimrod radar, has offered a fixed price bid to complete the job.

Several of these are understood to have been rejected, as not meeting the Royal Air Force's requirements, by a September 11 session of the ministry's Equipment Policy

Committee, chaired by Professor Richard Norman, its chief scientific adviser.

The content of the remaining short list is not known. The only certainty is that it includes GEC, whose rate of technical progress in the past six months is the yardstick by which the chances of all other contenders must be measured. If the list has only two names, the other is probably that of Boeing, whose E-3 AEW aircraft, already in service in the US and the rest of Nato, has long been favoured by the RAF.

Grumman and Lockheed of the US have also made strong bids, offering the same radar but in different airframes. The likely early casualties in the competition are the three minor UK contenders - MEL of Crawley, south of London, a Philips subsidiary which has proposed an Anglo-Dutch radar mounted in an Airbus, and Alphas Industries offering its dirigible balloons and Philips-British-Norvicom its lightweight aircraft as AEW platforms.

The eventual decision on a winner will not be easy. The RAF, for whom technical considerations are paramount, has so far been biased against Nimrod. The defence Ministry, facing real cuts in its budget, is clamoured by the cost of a system such as AEW. The Government, as a whole, would also have to weigh carefully the political price, in terms of lost employment and industrial prestige, of buying American.

A further complication is that France has decided to join in the British AEW competition, by evaluating the same major bids submitted to the UK Defence Ministry, with a view to making a cheaper, common purchase of the same system.

Mr André Girard, the French Defence Minister, who was in London last week to talk to Mr George Younger, his UK counterpart, about arms collaboration, made clear his country was interested in roughly the same AEW short list - GEC, Boeing, Grumman and Lockheed.

Telegraph wins 60% manning reduction

By Raymond Snoddy

THE DAILY TELEGRAPH has reached a comprehensive agreement with its production unions for a 60 per cent reduction in manning levels and binding arbitration in all future disputes including those over pay.

The deal, expected to be announced tomorrow, is a major step towards bringing the long-running Telegraph Company, publisher of the Daily and Sunday Telegraph, back to viability. It should lead to modest profits by the middle of next year.

The agreement, reached after more than six months of negotiations, covers the printing of the southern editions of the Telegraph at its new 675m web offset plant at Westbury Road on London's Isle of Dogs where production begins on September 28.

Redundancies and early retirements are expected to cost between £20m and £25m although the Telegraph will probably save around £20m a year from April when the Westbury plant is fully operational. Leasing charges of £15m a year for the new plant also begin in April. At the moment the Telegraph is producing in London on presses dating from the 1930s and 50s by 1,830 people (expressed as five equivalents) working 6,900 shifts a week.

Future newspapers will be produced by 670 people working 2,820 shifts

London may charge £500 for access to trading floor

BY BARRY RILEY

STOCKBROKERS may soon be charged a £500-a-year or more floor licence fee for the privilege of access to the London Stock Exchange's trading floor in order to transact business for clients.

The stock exchange plans to recoup its investment of more than £3m in the past year on extra market-making pitches and improved communications on the trading floor. Until now, members have had free access to the floor although in practice only specialised dealers and authorised clerks have had cause to go there.

According to Mr Patrick Milford-Slade, chairman of the stock exchange's Projects Committee, the intention is that the costs of the floor should be borne by those who use it. The price of a floor licence will depend on how many apply. The exchange has a revenue target. So it comparatively few wish to gain access to the trading floor, the cost could be higher than £500.

After the Big Bang deregulation

moves in the market, scheduled to take effect on October 27, transactions will no longer be passed through market makers on the floor. Most of the business of the exchange is expected to move to the "upstairs" trading rooms around the City of London now being fitted out with advanced electronic equipment by 27 firms of gilt-edged market makers and about 35 equity market makers.

High fees are also to be levied on market makers. They will pay £8,750 per pitch as a one-off charge (payable over three years) for the new facilities, together with an annual rental of at least £2,000.

Nevertheless, demand is such that the 24 pitches on the floor will continue to be fully occupied immediately after Big Bang. All the existing firms will retain a presence - although some will reduce their space sharply - and a number of new names will appear for the first time. Big Bang countdown. Page 13

Drug abuse warning to companies

BY NICK GARNETT

COMPANIES can no longer afford to sweep under the carpet the problem of drug abuse among employees which stretches from the shop-floor to the executive boardroom, warns a booklet published today by the Confederation of British Industry, the employers' group.

Produced in collaboration with the anti-drugs group Turning Point, the publication aims to show com-

panies how to construct a policy on drugs and direct them to where they can find professional help.

The booklet, *Danger-Drugs at Work*, says these particularly vulnerable to drug dependency include salesmen, line managers, process operators and senior managers.

It also argues that increasing use

of sophisticated equipment such as office computer systems and expensive semi-automated process plant means that an employee working under the influence of drugs can now do potentially more damage to the company and the health of the personnel around him.

The booklet does not include the effects of alcohol, but it does include the impact of tranquilisers

Pensions equality urged

BY ERIC SHORT

THE EQUAL OPPORTUNITIES Commission has renewed its call to the Government and employers to have a common pension age and to end sex discrimination in state and occupational pension schemes.

The Commission, in a leaflet published today, points out that discrimination in pension provision is still widespread, adversely affecting men in some areas as well as

women in other areas. Indeed the EOC emphasises that a retirement age of 65 for men and one of 60 for women is unfair to men.

Other discriminatory features include the automatic provision of widows' pensions but not widowers' pensions and different commutation factors when employees at retirement convert part of their pension into a tax-free cash sum.



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THE WALL STREET JOURNAL. EUROPE THERE'S NOTHING LIKE IT FOR INTERNATIONAL BUSINESS.

Peter Riddell reports on poll apathy among expatriates

Only 1% of Britons overseas register to vote at home

BRITISH citizens living outside the UK now have only two and a half weeks to register if they want the chance to vote in any general election up to February 1988.

So far the response has been disappointing, according to the Foreign Office's own admission. An official survey in the middle of this month showed that around 5,000 people had registered out of an estimated 500,000-plus qualifying expatriates.

The extension of the vote to Britons abroad arises from new regulations which came into force in mid-July following last year's Representation of the People Act. This concerned similar, although slightly more restrictive, rights to those that are already enjoyed by US citizens overseas and the expatriates of many European countries.

British citizens now resident overseas who have lived in the UK within the last five years can register as overseas electors through a British Embassy or consulate. This has to be done by October 10 each year, the same day as voter registration in the UK, for inclusion in the register which comes into operation in the following February for 12 months. On the first occasion, registration has to be witnessed by a consular official.

People are registered in the constituency where they were eligible to vote before they went overseas and have the right to vote by proxy at any parliamentary election or European parliamentary election, although not at local elections.

The low 1 per cent response so far is despite a considerable effort by British embassies and consulates in informing expatriates of their rights through personal contacts, posters and newspaper and radio advertisements.

The official explanation is that a lot of expatriates have been away on summer leave until recently and did not know of the change. There



Jim Spicer

is also a tendency to leave registration until the last moment, and indeed the pace has picked up in the last two weeks.

Mr Jim Spicer, the Conservative Party's vice chairman for international affairs, goes further in blaming both the apathy of the expatriates and the complex and restrictive nature of the regulations, compared with what is required by other countries.

Mr Spicer went on a world tour in late July and August to encourage registration and the establishment of branches of the party's new organisation, Conservatives Abroad.

He believes there were exaggerated expectations given the expertise of other countries. For instance, under procedures in existence for a long time only 20 per cent of US citizens living in Britain register to vote and only 8 per cent of Netherlands' citizens have done so.

The new British procedure is voluntary, unlike the compulsory registration for those resident in the UK. This creates the novel problem for British political parties of organising voter registration drives - a familiar part of US political campaigning.

The five-year time limit on the right to vote has caused some resentment among expatriates, as shown, for example by letters to the FT. But the formula was agreed as a compromise since the Labour Party favoured tight controls while most Tories wanted a less restrictive approach. But Labour's agreement was necessary to allow the measure to become law in time. So the five-year limit emerged.

All the main British parties have made some efforts to boost registration, but the Tories have done most with a direct mail shot to more than 100,000 Britons living abroad. So far, there have been only 750 positive responses, with a pick-up in the last two or three weeks.

Mr Spicer remains optimistic about building up Conservative support overseas. Mr Peter Morrison, the new Conservative deputy chairman, visited Hong Kong last week, in part fulfilling engagements arranged when he was still Industry Minister. Since all British residents have to notify their presence in Hong Kong to the authorities, it should be easier to track down potential voters.

Similarly, Mr Norman Tebbit, the Conservative Party chairman, visited the Cannes branch a week ago as part of this drive. A total of 26 branches have now been set up or have key officers in place, though the coverage is patchy, especially in the US. Branches have been in existence for a long time in Paris and Brussels (where the SDP also has members organised).

Originally, some party officials had hoped that the extension of the vote to Britons overseas could be as electorally important, particularly for the Tories, as the organisation of postal votes within Britain.

It now looks as though the other major change in last year's law, the extension of postal votes to holiday-makers, could be electorally more significant.

September, 1986

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UK NEWS

Liberal Party assembly in Eastbourne

Critical test for Alliance stance on nuclear arms

BY MICHAEL CASSELL, POLITICAL CORRESPONDENT

ATTEMPTS by the Social Democratic-Liberal Alliance to agree jointly on nuclear defence policy will this week face another critical test at the Liberal Party assembly in Eastbourne, south England.

The issue, which centres on the need to retain a British nuclear capability after Polaris, the submarine launched nuclear deterrent, looks certain to dominate the assembly, which starts today, and threatens to put Alliance unity under increased pressure.

Last week, the Social Democratic Party (SDP) backed the Alliance initiative to explore the possibility of a European minimum deterrent, leaving open the question of a Polaris replacement. But at Eastbourne the Liberal leadership faces vociferous opposition from sections of the party which believe it is in danger of softening its long-standing commitment to nuclear disarmament.

Three Liberal MPs have already voiced their opposition to any replacement for Polaris and, in criticising the concept of a "European pillar" of nuclear defences, have called on the party to restate its objective of a non-nuclear Europe. They are expected to support a con-

The latest public opinion poll on voting intentions, conducted by Harris for the BBC, gives Labour 41 per cent, Conservatives 38 per cent and SDP-Liberal Alliance 22 per cent.

ference amendment which emphasises that Liberals do not want to add to, or maintain, existing nuclear capability but expect a reduction in, and an eventual end to, nuclear weapons.

There are signs that a compromise, which could save the Alliance from a damaging split, can be found. Mr Simon Hughes, the Liberal MP for Southwark, London, who wants the conference to reinforce the party's anti-nuclear stance, has indicated that critics might tolerate a minimum deterrent proposal, provided it represented no more than a step towards a clear commitment to total nuclear disarmament.

Mr David Steel, the Liberal leader, yesterday claimed that he was confident of reaching agreement on an Alliance defence policy. He said on BBC television that Britain's existing nuclear capacity would be re-

tained "until such time as it is negotiated away."

Mr Steel said that the scrapping of nuclear weapons by Britain would not bring about a nuclear-free Europe. The minimum deterrent proposals, he added, meant Britain would retain an influence on the scale and deployment of the deterrent and on eventual disarmament talks.

SDP leaders yesterday attended pre-conference sessions in Eastbourne to seek Liberal support for an Alliance defence policy. Mrs Shirley Williams, the SDP president, said that rejection of the nuclear umbrella would be "political suicide."

The two Alliance leaders confirmed that they would not, this year, be able to appoint single spokesmen. Dr David Owen, the SDP leader, said one of the difficulties was that some of its potential spokesmen were not yet in Parliament.

Dr Owen also conceded that the Alliance proposals on tax and benefits still needed "fine-tuning." He also admitted that the plans, originally presented as self-financing, could require some extra finances.

Britain 'ready to talk with Unionists'

By Malcolm Rutherford

THE BRITISH Government has repeated its readiness to talk to the Ulster Unionists about devolution in Northern Ireland, provided there is no suspension of the Anglo-Irish agreement signed last November.

A statement by the Northern Ireland Office, re-affirmed by Mr Tom King, the Northern Ireland Secretary, said that the talks could take place with the Unionists and other constitutional parties in the province in the interval between meetings of the Anglo-Irish Conference, which was established by the November agreement.

The statement reflects increasing British concern that the agreement has so far been almost totally rejected by the Unionists. At the same time, however, there is no disposition on the British side to go back on the terms of the agreement with Dublin.

The slight switch of emphasis on the part of the Northern Ireland Office came after a speech by Sir Frederick Catharwood, a British Conservative Member of the European Parliament, at Queen's University, Belfast on Friday.

Sir Frederick called for talks between the British Government and the Ulster parties

Kinnock challenges sanctions job losses

BY CANUTE JAMES IN KINGSTON

THE LIKELY effects on employment in Britain of strict economic sanctions against South Africa has been exaggerated and not more than 20,000 jobs would be lost, according to Mr Neil Kinnock, the UK Labour Party leader.

Speaking to a press conference at the end of a three-day visit to Jamaica, Mr Kinnock said projections that between 200,000 and 250,000 British jobs could be lost from sanctions "depending on which minister you speak to" could not be substantiated. While no-one wanted any jobs lost, it was unlikely that full economic sanctions against South Africa would mean a shut-down of affected British businesses overnight, he said.

The Labour Party leader suggested that countries which were opposed to sanctions would not be thought of kindly by southern African states and that British business was threatened by the loss of a market in these southern African countries which was bigger than it had in South Africa.

Mr Kinnock said the weekend

meeting between Sir Geoffrey Howe, the Foreign Secretary, and Mr Oliver Tambo, leader of the African National Congress, had shown up the UK Government's short-sightedness in dealing with southern Africa and indicated that the Foreign Office had persuaded the Prime Minister, Mrs Margaret Thatcher, to demonstrate "common sense."

In a speech earlier to the annual conference of the Jamaican opposition People's National Party, Mr Kinnock attacked Mrs Thatcher and Mr Helmut Kohl, the Chancellor of West Germany, for not fully supporting the package of sanctions against South Africa which was proposed by the EEC.

Speaking on immigration issues, Mr Kinnock said it was Labour's policy to reverse the "unfair, unwarranted and discriminatory" requirement that citizens of some Commonwealth countries and Pakistan obtain visas to enter Britain. He said a Labour Government would reshape current immigration legislation, replacing it with "a proper and fair system."

International gathering on nuclear safety rules

BY DAVID FISHLOCK, SCIENCE EDITOR

SENIOR government ministers from more than 100 countries meet in Vienna on Wednesday to try to agree much tighter international rules for nuclear safety following the Chernobyl explosion in the Ukraine last April.

Mr Peter Walker, UK Energy Secretary, and Mr Alastair Goodland, minister responsible for nuclear energy, will represent Britain at a special conference of the International Atomic Energy Agency, called to discuss expert Western analysis of the Soviet accident report.

These ministers expect to receive by mid-October the lengthy report of Sir Frank Layfield on the Sizewell public inquiry into the safety of

a new generation of nuclear reactors for Britain.

The Soviet findings are on the cause of the explosion, presented to 500 nuclear experts at an inquiry in Vienna last month, revealed major design faults in the Russian-invented RBMK-type reactor, as well as many human errors and the deliberate flouting of safety rules, leading to the explosion.

Soviet frankness at the inquiry had made the possibility of sensible agreement on these four matters a realistic objective of the conference, Mr Walker said.

The Chernobyl design failings had been identified by the British nuclear industry in 1977.

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UK NEWS

David Lascelles meets a gamekeeper turned poacher

Patching up wounds at Midland



Sir Kit McMahon

"I HAVE found in Midland Bank a very lively group of people who have been through a terrible time." Thus, Sir Kit McMahon on the state of morale in the institution of which he has just become the senior executive officer.

Few people in the City of London have come to a job amid such high expectations. The former deputy governor of the Bank of England, intellectually distinguished, profoundly experienced in financial affairs, has assumed control of British bank where the wounds from the Crocker National Bank disaster in the US are still plain to see.

How will he patch Midland and where does he intend to take the UK's third-largest clearing bank? Does he even have the skills for the job, coming as he does aged 39 to his first post in the commercial world?

Sir Kit has certainly worked no time. After spending the summer on an intensive tour of Midland's installations worldwide he moved into the fifth-floor chief executive office in the City street known simply as Poultry only 18 days ago, a large, panelled room with deep windows and attendants in black suits standing respectfully outside.

Last week Sir Kit announced a string of senior management appointments which put his stamp on a new corporate structure for Midland and will eventually - by the time more junior appointments are

made - ensure that his men occupy key positions in the vast army of 60,500 people he now heads. Next April he assumes the chairmanship as well, and his contract is open-ended.

"Our strategy," he said, "must be to build on strengths." Already he is using commercial jargon which jolts any listener accustomed to his elegant style as a central banker. But he stresses that the appointments confirm a strategy already developed by his predecessors, from whom he is anxious not to steal any credit.

"What makes this job attractive is that a great deal has already been done to sort out conflicting views, clarify strategy and so on," Crocker, for example, has been sold, and Midland has got an investment banking business going for Big Bang, the forthcoming deregulation of the City.

"I'm struck by what a lot of resources the group has: Thomas Cook, insurance, units trusts, international capital markets. And then there are the branches which will continue to be our core business. That's where the money is made. The people here are very market-oriented. It's rather different than I expected. I'm struck by how go-go they are."

Sir Kit is pleased with Midland's position in the UK retail market where his "free-it-in-credit" campaign (the first among the Big Four) has won it a lot of new accounts.

But it is a different matter on the corporate banking side. "What with Crocker and so on, we have dropped behind here." But by bringing in new talent and combining Midland's traditional clearing bank skills with the new securities operations being developed by Samuel Montagu, the merchant banking subsidiary, Sir Kit intends to rebuild Midland's credibility as a corporate banker.

He has divided the market into two, the global and the commercial companies. "The second are companies where we are still cleverer than the corporate treasurer. The first is the other way round. The global market is a difficult one, but we have to be in it."

Sir Kit is particularly keen to get

a securities dealing licence for Midland in Japan so that he can pull together a global investment banking business using the securities operations that have already been established in New York and London.

But he will not be able to follow his rivals like Barclays and NatWest and get listings for Midland on overseas stock exchanges to tap new sources of capital until Midland's balance sheet has recovered from the hundreds of millions of pounds lost through Crocker.

Sir Kit does not expect profits to come easily. The Big Bang, which will pitch Midland into intensely competitive securities markets, means "it's going to be quite hard to make money, and we're going to have to sweat it out."

He is also worried about the overall economic climate. "There's the time bomb of the US external deficit which people have only just woken up to. That's going to be extremely hard to handle. It could affect the foreign exchange markets and free trade and so on. It makes me very cautious. Banks will have to watch their asset and liability positions very carefully."

And how does the gamekeeper-turned-poacher now view the banking authorities? Do those good habits he so frequently urged on bankers in his previous job now seem like onerous constraints? "You start seeing things in a different way," he admits with a grin. "I'm about half way in between at the moment."

Output expected to pick up slowly

By George Graham

BRITISH manufacturers expect their output to pick up slowly over the rest of this year, but order books remain flat, and export orders have improved only fractionally from the dismal levels of the last few months.

The September trends survey by the Confederation of British Industry (CBI), the employers' group, shows that 12 per cent of the 1,556 manufacturing companies questioned have order books above normal, compared with 33 per cent whose order books are below normal. This leaves a balance of 21 per cent, little changed from the August level.

Export order books were felt to be above normal by 14 per cent of companies and below normal by 37 per cent, the CBI says. The food, drink and tobacco industries report the best improvement in overseas orders, but in general, export order books have not been so weak for almost three years.

Mr David Wigglesworth, chairman of the CBI's economic situation committee, said conditions had improved slightly for exports but repeated the CBI's call for lower interest rates and moderate pay settlements.

British pay deals unlikely to fall below 5% barrier

BY DAVID BRINDLE

PAY SETTLEMENTS are running at average increases of between 5 and 7 per cent and show little sign of falling rapidly to levels expected by the Government, two surveys published today suggest.

The surveys agree there has been a decline in the number of settlements above 7 per cent but indicate a bunching above the 5 per cent barrier.

The emergence of 5 per cent as a minimum expectation this winter would concern the Government. In a weekend speech, Mr Kenneth Clarke, Paymaster General, continued the ministerial attack on the idea of a "going rate".

The surveys, by pay research groups Income Data Services and Industrial Relations Services, differ in the stress they put on the fall in settlement levels at the top end of the median range.

According to IRS, settlement levels are "now firmly moving in a downward direction." Although this is not a dramatic trend, seven out of 10 bargaining groups are expecting less than they did last year, and the median has fallen in the last quarter (ending July) to 5.7 per cent.

IRS predicts the downward drift will continue throughout 1986 but says it may not last into next year because of rising inflation, increas-

ing company profitability and pay pressure in the public sector.

The other survey, by IDS, finds no significant downward trend in settlement levels in its overall review of 1985-86. Further, it says any fall in basic pay deals is likely to be offset by top-ups through salary increments, productivity and skill premiums.

As a result, IDS predicts, the underlying increase in average earnings is likely to remain on or about its current rate of 7.5 per cent.

Pay and Benefits Bulletin 168; IRS, 57 Kingsway Road, London NW6 2EJ; by subscription, IDS Report 481; IDS, 183 St John Street, London EC1V 4LS; by subscription.

● The Government's plans to reform personal taxation will give tax handouts to the rich and limit the independence of married women, according to a report published today by the Low Pay Unit, Helen Hagan writes.

The Government is proposing a system of transferable tax allowances to replace the married man's allowance. In its response to the Green Paper (consultative document), the Low Pay Unit claims the plan could give couples with investments of more than £50,000 a year tax cuts of over £3,000.

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New ferries 'challenge financing of tunnel'

BY ANDREW FISHER IN BREMEN

MR GEOFFREY PARKER, chairman of European Ferries, threw down a strong challenge to the backers of the planned Channel tunnel as the company's cross-Channel ferry was launched in West Germany at the weekend.

The new ship, one of two being built for the company at a total cost of £30m - up from an original £18m, as a result of standing's decline, would be cheaper to run, faster and bigger than anything yet seen on the Channel, he said.

Casting doubts on the financial assumptions behind the tunnel project, he said: "We hope that the financiers will see the sense where politicians have failed."

The new ship, the 20,000-ton Felix de Dover, and a sister ship, Felix de Calais, are being built for the group's Townsend Thoresen subsidiary by Schichau Unterweser in Bremen.

The Felix de Dover will enter service on the Dover-Calais route next summer. With room for 2,300 passengers, she will have twice the capacity of the largest ferries now on the route.

Mr Parker called the tunnel a "well-known politicians' folly" and said it was still very questionable whether it would ever be built.

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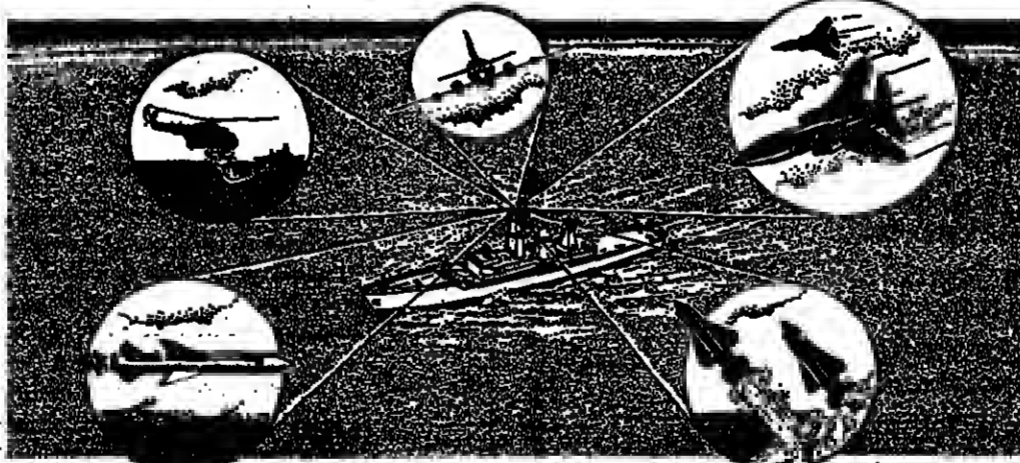
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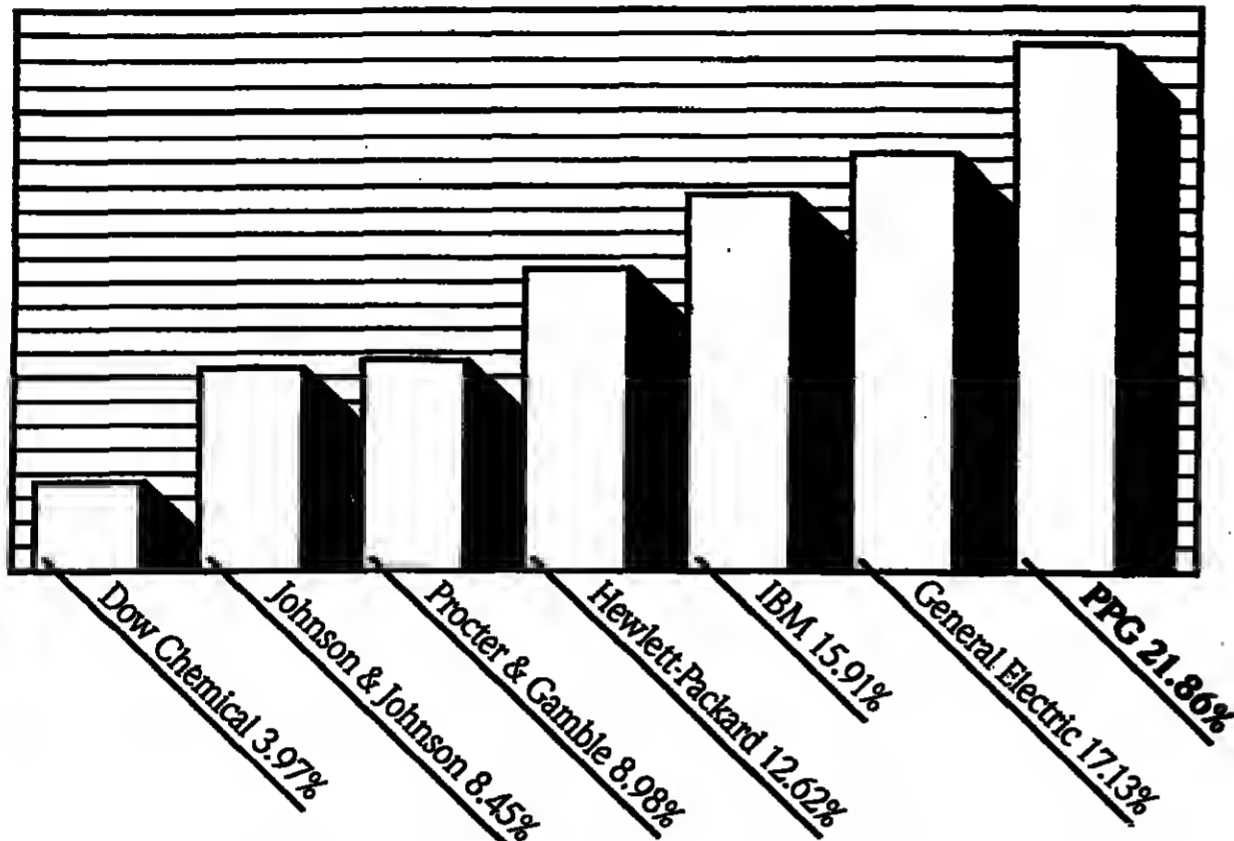
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UK NEWS

THE WEEK IN THE COURTS

Controlling the chief constable

THE STALKER affair is the latest and longest-running episode in the saga of relationships between chief officers of police and police authorities in England and Wales. Not only did the case of Mr John Stalker bring into prominence the new disciplinary process against a senior police officer and his removal from an official inquiry into killings by the Royal Ulster Constabulary; it also spawned a fresh irritant in the worsening relationship between the Labour-controlled Greater Manchester Police Authority and its chief constable, Mr James Anderson.

Mr Stalker, Manchester's deputy chief constable, was removed from the inquiry last May to face allegations that he had brought the police into disrepute by associating with so-called "known criminals." The Greater Manchester Police Authority rejected a report which concluded he should answer 10 charges before a disciplinary tribunal and restored him to duty.

The police authority has also decided to reverse its decision to question Mr Anderson about his social engagements, associations and use of police facilities. That conciliatory move will do little, if anything, to dispel the continuing uneasiness in the relationship. This unhappy state of affairs is not helped by uncertainty and misunderstanding about the legal powers and duties of the two elements in the government of police forces in England and Wales.

The distinctive characteristic of the way the police force is governed is the provision in the Police Act 1964 which says each police force shall be "under

the direction and control" of its chief constable. This is in stark contrast to the position of other directors of local government services. Thus the Education Act 1944 establishes a local education authority with the duty to secure sufficient schools for adequate educational provision, and to that end the authority must appoint a proper person to be its chief education officer.

Social services are in a similar position. The Local Authority Social Services Act 1970 requires all local authorities to appoint a social services committee to which all matters concerning the authority's responsibilities for social services must be referred. The authority is required to appoint a director of social services. Here, the local responsibility rests on the authority, with the director as the functional appointed to carry out its purposes.

Unlike the chief constable, the director is subordinate to the committee's authority and is answerable for every aspect of the services. The supremacy of the chief constable, which is enshrined in statute, is now being challenged in practice by some police authorities that seek to circumvent the strict legal position.

Once appointed to the office of chief constable, he is almost immune from removal. Short of establishing corruption or misconduct, a police authority may call upon him to retire on one ground only—that of the "interests of efficiency." This provision has never been formally invoked, although some retirements have been negotiated against this legal background. The final decision con-

cerning dismissal, moreover, does not lie with the authority but with the Home Secretary. The practical reality is that a chief constable can ignore his police authority so long as he can count on the support of the Home Secretary.

In the absence of any direct power over a chief constable, police authorities have sought at least to be better informed about the functioning of their police forces. The only explicit statutory duty on a chief constable is to submit an annual report. Additionally, the authority may "require" that he supplies a written report on any matter pertaining to the policing of the area. Some authorities have asked for such reports in the wake of controversial incidents. The chief constable may decline to make such a report if he believes that it would contain information, disclosure of which would prejudice the public interest. The authority can appeal to the Home Secretary, who has the final word. Police authorities are therefore, in this respect also, at the mercy of their chief constables.

The precise ambit of the chief constable's powers has never been clearly defined. But there has grown up a general consensus that chief constables have control over "operational" matters which they are not bound to discuss with, or report on, to their authorities. The deployment of the Special Patrol Group that led to the Brixton riots in 1981 was never discussed with local representatives, and became the subject of acute controversy. The establishment of Community Liaison

Committees under the Police and Evidence Act 1984 was designed to overcome the gap in local knowledge of police operations.

A second area of doubt centres on the question of financing the police operations. "Direction and control" involves decisions that require expenditure. Yet the power to provide funds remains in the hands of the police authority. Can the authority use its powers to veto particular expenditures, and indirectly exercise control over the purchase and use of weaponry or deployment of manpower? Such issues have recently been raised in connection with the purchase of CS gas and other riot equipment. The huge costs of financing the police forces which assisted their colleagues in dealing with the miners' strike of 18 months ago are still being disputed, and may end up in the courts for resolution.

These are only part of the larger problem of how to construct for the country a modern police service under democratic control. Policing decisions are in essence policy matters that require that a police authority be responsible for them. How that responsibility can be effected in the absence of mechanisms of control by the authorities that employ chief officers of police is one of the unanswered questions. The Royal Commission on the Police in 1962 did not directly address those issues. Twenty-five years later the need for a fresh look at the organisation of policing in Britain is urgent.

Justinian

One-tier multi-purpose local authorities proposed

BY ROBIN REEVES

THE TWO-TIER structure of local government in England and Wales should be replaced by unitary multi-purpose authorities based upon natural communities, according to a report from the Society of Local Authority Chief Executives (Solace).

The society also wants the system of rates and central government block grants radically amended in favour of a combi-

nation of rates and local income tax. In urging a significant shake-up in the structure of local government, Solace says the systems devised in the 1970s—although managed with commitment and professionalism—are not designed for the environment of the 1980s and 1990s.

Solace says that if county and district councils were replaced by one tier of local government, the confusion of responsibilities

would immediately recede.

"It should be more economical, by eliminating duplication of management in the present tiers. An additional consequence would be an increase in accountability," Solace says.

The report suggests that the last reform of local government, in the early 1970s, was too preoccupied with the optimum size for efficient administration, rather than

natural communities, which vary in size.

"As a result, many parts of the country found themselves administered by artificially designed counties and districts, with often strangely derived names based on lesser-known rivers or romantic folklore."

Solace says future reforms should be based upon a boundary commission with wide powers proposing structures after in-depth consultation

MINORCO

Results for the year to June 30, 1986

THE YEAR IN BRIEF

Earnings from operations increased by 56% to US\$71 million.

Equity share of investors' earnings declined by US\$55 million due to the cessation, at the end of the previous year, of equity accounting Salomon Inc in which Minorco's interest had been reduced to 14%.

As a consequence earnings before extraordinary items decreased from US\$110 million to US\$81 million.

Dividends declared for the year increased by 9% to 24 US cents per share.

Investments made during the year, principally in oil and gas, amounted to US\$251 million.

Cash resources at year-end were US\$164 million.

Net asset value per share increased by 12% to US\$14.70.

US\$ millions except per share amounts	1986	1985
Earnings from operations	71	45
Share of undistributed earnings of investments accounted for by the equity method	11	66
Earnings before extraordinary items	81	110
Net earnings	72	105
Dividends declared	41	37
Earnings from operations per share (\$)	0.41	0.27
Earnings before extraordinary items per share (\$)	0.47	0.65
Net earnings per share (\$)	0.42	0.61
Dividends declared per share (\$)	0.24	0.22

OUTLOOK FOR THE COMING YEAR

For the coming year Minorco's earnings from operations are expected to be somewhat reduced principally because of lower interest income. In regard to Minorco's share of undistributed earnings of investments accounted for by the equity method, present indications are that the losses of Inspiration Resources Corporation will be substantially reduced in the current year while the earnings of Englandfield Corporation and Charter Consolidated P.L.C. should show further advances. The results of Consolidated Gold Fields PLC are expected to improve subject always to the gold price and currency exchange rate movements. The contribution of Adobe Resources Corporation is likely to be negative as a result of weakness in oil and gas prices.

In the previous five years, earnings from operations which essentially represent Minorco's cash earnings were adversely impacted by the requirement to invest considerable equity finance into Inspiration and by the decline in the US dollar value of dividend income from UK investments. In regard to Inspiration, although base metal prices remain depressed, the major reorientation of its business which took place last year appears to be succeeding, while over the last two years stalling recovered some lost ground against the US dollar. In consequence earnings from operations in the foreseeable future should support a higher dividend level. Consequently the final dividend in respect of the financial year to the forecloseable future should be increased from 16 US cents to 18 US cents per share, making a total for the year of 24 US cents per share.

The final dividend for the year to June 30, 1986 of 18 US cents is payable on November 12, 1986 to shareholders of record on October 5, 1986. The annual report will be mailed to shareholders on or about October 14, 1986. Copies may be obtained from the UK transfer agent Hill Samuel Registrars Limited, 6 Greenock Place, London SW1P 1PL.

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Argentina's economy

Ministers burn midnight oil

By Tim Coone in Buenos Aires

SEPTEMBER has brought Buenos Aires good things from the North. The warm air currents have ushered in the first balmy days of a Southern hemisphere spring, leading a festive air to the celebration of "1,000 days of democracy" under President Alfonsín. And from the creditor banks has come the news that Argentina has been granted another six-month stay of execution on its obligation to make some \$7.5bn in principal repayments on its \$50bn foreign debt.

Solvency has been assured at least until 1987. Short-term trade credits are to be extended until the end of the year, and government and the banks will have until March 1987 to negotiate a 10 to 12-year rescheduling for principal payments on the medium to long term debt.

That such a rollover would occur was never seriously in doubt. Most of the country's large foreign bank creditors recognise that renegotiation is the only alternative to a dramatic debt write-off which could send their shares plummeting. Although short, the breathing space provided by the rollover may nonetheless prove vital for the survival of the Government's long-term economic strategy.

President Alfonsín is now almost half-way through his six-year term. He can claim two major successes: the restoration of democratic government after almost a decade of military rule, which had become synonymous with economic mismanagement and political violence; and the implementation of the so-called "Austral" plan launched in June last year, a programme of wage and price freezes coupled with limitations on money supply growth which put an end to a prolonged period of hyperinflation.

The latter achievement has recently appeared to be in jeopardy as a surge in inflation over the past two months, after a year of relative price stability, has shaken the Austral plan. The speculative panic which gripped the financial markets for a couple of weeks in August was an uneasy reminder that old habits die hard.

Economic crises are inevitably the spark of political crises, and the chiefs of staff of the three branches of the Argentine military have made it clear recently that they still consider themselves the final arbiters of power.

Economic stability is thus an overriding priority for the Alfonsín government. In fact, last month's economic ministers created an opportunity to eliminate a major institutional weakness in the economy: a long-standing dispute between the central bank and the Economics Ministry over monetary policy. The appointment of Mr José Luis Machinea as the new President of the central bank in place of Mr Alfredo Concha, an old political ally of the President, is expected to resolve this conflict. His first weeks in office have already been marked by tighter monetary controls and reliable estimates show inflation since the beginning of September on a downward curve.

The restructuring of the central bank's executive board with technocrats instead of political appointees was a clear response to the need for greater coherence in government economic policy.

Tighter monetary controls alone, however, will not cure Argentina's economic ills. The economy's performance over the past two decades has proved disappointing. According to one leading Argentine industrialist, Mr Roberto Rocca, growth in annual per capita income in Argentina has lagged well behind that in Brazil, rising only from \$2,425 to \$2,517 between 1964 and 1985, while per capita income in Brazil increased from \$1,185 to \$2,568 over the same period.

Mr Jorge David, a private sector businessman, told a recent manufacturers' conference that per capita industrial output is now 30 per cent lower than in 1978.

However, the first signs of a clear industrial strategy have begun to emerge from the present government. Speaking at the same conference, the Trade and Industry Minister, Mr Roberto Lavagna, outlined a policy based on export-orientated industrial growth.



the development of a regional common market with Brazil, and technological modernisation.

The model based exclusively on import substitution and the domestic market can no longer guarantee either the conditions for growth or a more adequate distribution of income," he said.

Fundamental changes in fiscal policy are being implemented which will benefit industrial exporters: customs duties have been eliminated on imports of raw materials used to produce 11,000 categories of exportable goods, and efforts are being made to remove bureaucratic delays.

In addition, the steel, sugar, aluminium and leather sectors are also to enjoy more freedom in their purchases of raw materials on condition that they sell their products to exporting industries at a quality and price equivalent to those available on the international market.

Meanwhile, the recently adopted policy of implementing a series of steady mini-devaluations appears clearly aimed at a gradual realignment of prices relative to the international market, while minimising the social pressures which would result from a sharper devaluation and the unsettling effect this could have in the financial markets.

The other major constraint on industrial growth is the lack of credit available from the banking system, which is required to hold high levels of

reserves thus restricting available credit and resulting in high interest rates.

The high reserve requirements, amounting to 72 per cent of deposits have resulted in a phenomenal growth of an officially tolerated black market, a parallel financial system which operates illegally with no reserves.

Few long-term loans for investment are available, as most deposits are only of a short term nature.

Financial reform has been promised by the new central bank president, Mr Machinea, but vested interests and political pressures will ensure that this will be a slow and gradual process.

Argentina's position in the foreign debt debate is hardly likely to meet immediate agreement from its creditors: it is proposing that creditor banks link the level of its debt service payments and new lending to the price of the country's main exports, cereals and beef (following in the steps of Mexico, which is seeking to link its debt service payments to the course of world oil prices).

Asked whether the banks were ready to concede such a principle, a top executive of one major western bank in Buenos Aires recently replied "Not yet."

Argentina's difficulties in competing on world cereals and beef markets with subsidised exports from the US and the EEC have led to a fall in the country's foreign exchange

earnings from exports. The combined trade deficit for 1986 and 1987 is expected to exceed \$9bn.

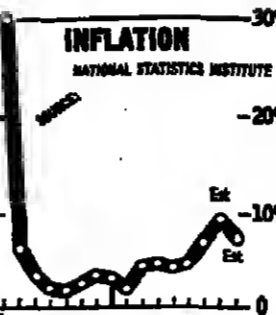
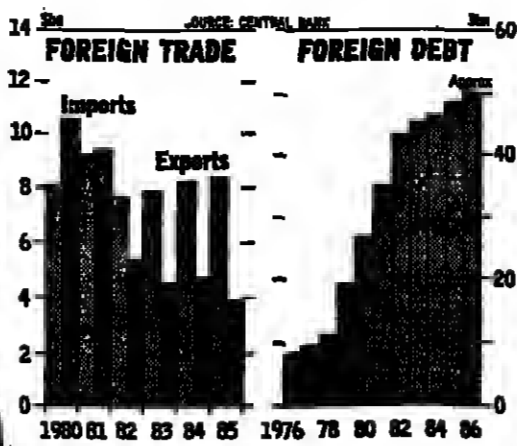
The Government is not prepared to countenance any new recessionary economic measures, as it has made clear in recent talks with the IMF. Important mid-term elections are due next year for the governorships of the country's 22 provinces, which will prove a crucial test of the Government's popularity. The trade unions are already threatening renewed strike action against the recent anti-inflation measures. Growth must therefore be the economic objective from now on.

The Government therefore sees its way forward by asking forbearance and patience from its international creditors, despite the occasional hiccup.

The trade unions and the Peronists would be only too happy to see an end to the Austral plan. Economic restructuring, they argue, could be financed from the foreign exchange saved through a debt moratorium.

The Government is therefore working on two fronts: to head off confrontations with the unions, which will require some flexibility on wages; and to convince the banks and the IMF that its long-term economic plans have a chance of success.

Spring may have come to Buenos Aires, but the lights are still burning late into the night at the Economy Ministry.



The floor show will go on

By Barry Riley



THE STOCK Exchange's trading floor has never been more crowded. In a \$2m investment programme the Exchange has crammed 224 jobbing pitches into a space that previously held 183, and has fitted numberless screens, terminals, telecommunications devices and other electronic wonders that go with a modern securities exchange. Jobbers complain bitterly that there is no longer any room to sit down, let alone swing a cat. But could this be the trading floor's last, fleeting week of glory?

Next Monday there will suddenly be a lot more room. Four weeks before Big Bang many of the market makers will be moving upstairs to their new trading rooms. But they will still not be able to operate in their offices before 9 am and after 3.30 pm, the official market hours. But dealing in the peak periods has never been handled this way.

Telephone dealing is, of course, nothing new. It has been normal for jobbers to operate from their offices before 9 am and after 3.30 pm, the official market hours. But dealing in the peak periods has never been handled this way.

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the 60 or so top grade alpha stocks to start with. That will leave the betas (about 500 or them) and several thousand gammas. The expectation is that the markets in many of these stocks will stay on the floor (though business in the smallest and most illiquid securities of all, the deltas, will probably be done on the telephone).

Moreover there could be a retail business in gilt-edged, "retail" in this context apparently meaning deals of anything up to £1m. Some of the gilt-edged market makers will be concentrating on this kind of business, rather than multi-million institutional trading.

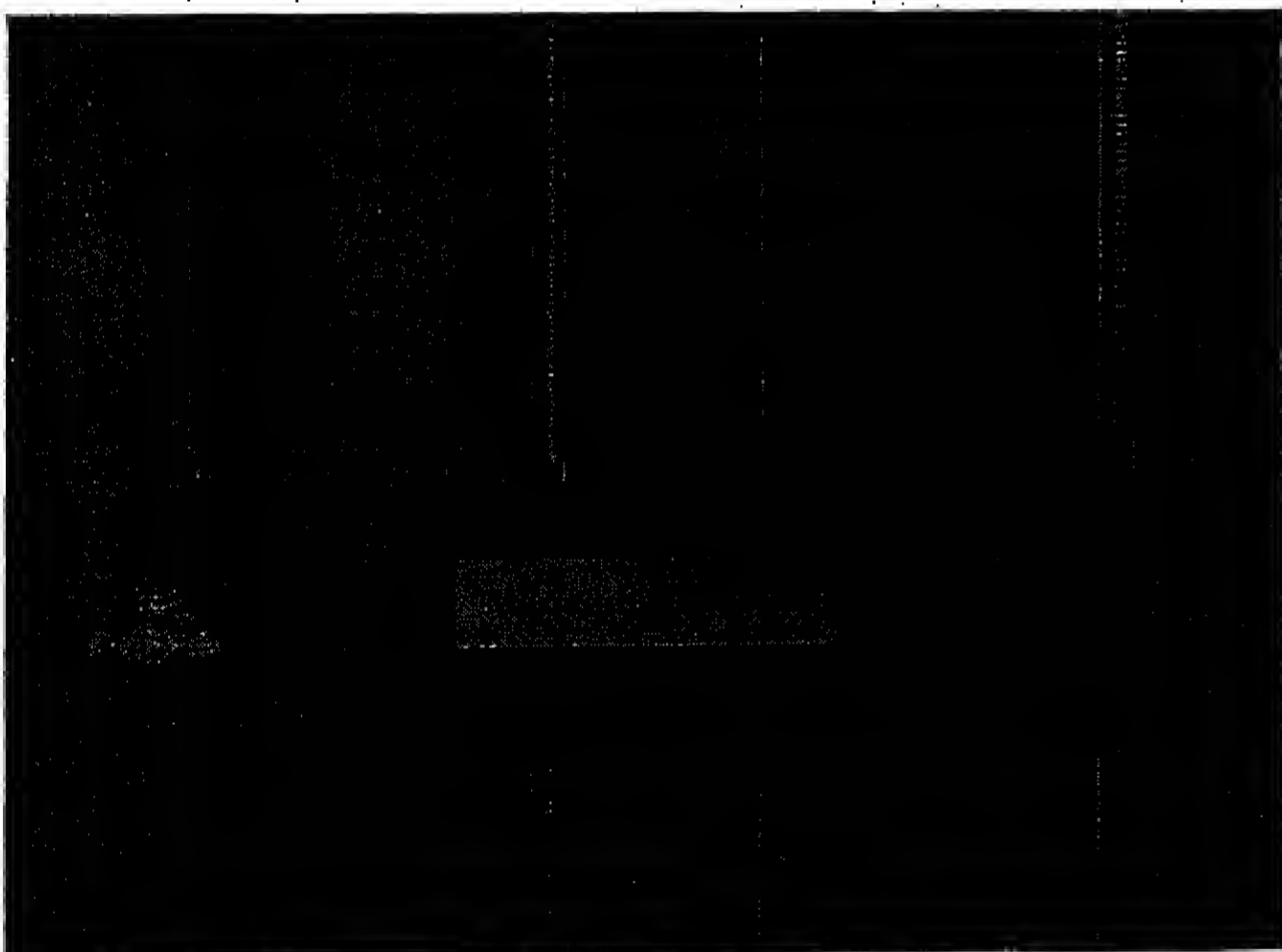
It is worth bearing in mind that some of the newer market makers will be anxious to emphasise their commitment to equity, and a team of traders on the market floor might be an effective way of doing that.

Outcry

Screen services are all very well, but big investors and agency brokers might be doubtful about the seriousness of some of the newer market makers, especially if the quotes on the screen are only in 1,000 shares and the real prices in decent sizes can only be discovered over the telephone. But again, this could be a transitional rather than a long-term support for the population of the Stock Exchange floor.

Eventually, the floor's main focus could be on traded options, which will continue for the foreseeable future as an open outcry rather than telephone or screen-based market. Options business has recently been expanding fast, and will continue to do so as options traders develop their links with the sharply increased number of equity market makers.

In due course, the Stock Exchange may try to get closer to the financial futures exchange Liffe, which operates from cramped quarters over the road in the Royal Exchange, and might need extra space before long. But first the two markets will have to get over the little rift which has arisen from Liffe's decision to go ahead with a rival Footsie options contract at the end of this month.



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Deborah Warner's unfunded Rick Theatre Company un-

Romeo, Oswald and Nicky Lancaster. Storming Coriolanus...

Patrick Macnee returns to West End in thriller *Killing Jessica*, which opens at the Savoy Theatre on November 18.

Loose Tubes on first UK tour. The Arts Council's Contemporary Music Network opens its 1986-87 season with the largest jazz group it has ever taken on tour.

Architecture/Colin Amery

Hugh Casson's diverting journey

Architect *Etcetera* is the title chosen by Sir Hugh Casson for the exhibition of his life's work that can be seen at the RIBA Hans Gallery, 21, Portman Square, London, W.1. until October 25.

Hugh Casson suits the English approach to the visual arts — he doesn't take things too seriously. As he says in the elegantly written companion to the exhibition, "the art room at school was the place you went to when you were not feeling very well."



Hugh Casson's elephant house in London Zoo

the Royal College of Art. In the background all the time is the English love of the picturesque and informal — a nation of gardeners rather than artists.

One of the lessons that cannot be ignored from this exhibition is the paralyzing influence upon creative life in England of the Committee, the Historic Buildings Commission, the GPO Stamp Committee, the Historic Buildings Committee and countless others?

The elephant and Rhinoceros House at the London Zoo is one of the practice's best buildings. I do not know whether the great mammals like it, but it actually looks like and evokes the scale and texture of the creatures within.

Ely Ameling/Wigmore Hall

David Murray

Throughout her Ravel recital on Saturday it was a pleasure to hear Miss Ameling. If there were passages of strain in her recital, none was evident this time. Her seasoned soprano was very comfortable in Ravel's preferred high-mezzo range.

News/Paramount City

Martin Hoyte

Once the doors never closed on statuesque nakedness in legally enforced immobility. Now female frocks are fully clothed. The Windmill has been transformed into a little bar-theatre, the latest chapter in Paul Raymond's stately progress to the legit. He'll be seen at Arts Council grant next.

The story tells of Lord, editor of a big city newspaper, making capital from the search for a psychotic killer. Lord's daughter meanwhile makes a blind date with someone contacted through the personal column who just happens to be — yes, you can guess.

Maw's Sonata Notturna/Elizabeth Hall

Andrew Clements

Nicholas Maw's new work for cello and strings was given its first performance last May by Alexander Baillie and the Peterborough String Orchestra in King's Lynn, a hangover from the festival there in 1985, when Maw was the featured composer.

the mood is subdued, possibly nocturnal, with the textures muted throughout. It is very much a work for cello with subsidiary accompaniment, for at no point does the orchestra writing set out to rival the soloist's intensity or thematic interest.

It is all perfectly seamless and impressively fluent, but does not, I think, reveal much that is new about Maw or his development. The highly tonal language that he has fashioned for himself, in which the spirits of Britten and the late romanticists sit comfortably side by side, is perfectly suited to such a medium as this, and writing for it does not seem to have engendered much fresh creative friction in the composer.

Lead Me a Tenor cast changes

From this evening there will be some cast changes in *Lead Me a Tenor* at the Globe Theatre. Ian Talbot succeeds Denis Lawson as the operatic stooge to an incapacitated Veridian tenor, and other newcomers to the show include Susannah Fellows, Paul Bentley, and Debbi Rhytha.

Dave Allen at the Albury

Dave Allen is coming back to the West End stage after five years. His one-man show will run for a limited season of 14 weeks at the Albury Theatre, opening October 30.

Arts Guide

Music/Monday. Opera and Ballet/Tuesday. Theatre/Wednesday. Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

Music

LONDON

London Symphony Orchestra and Chorus conducted by Richard Hickox. Brahms, Kodaly and Rosini. Bachson Hall (Tue) (83 9201).

PARIS

Anna Stella Satek: piano. Schumann, Villa Lobos, Gershwin (Mon). Salle Gaveaux (433 2030).

WEST GERMANY

Berlin, Philharmonie: Munich Philharmonic Orchestra, conducted by Sergiu Celibidache. Bruckner (Wed).

NETHERLANDS

Amsterdam, Concertgebouw. Animal Zoo-Mex conducted by Netherlands Philharmonie, with Maria Tjopo, piano. Honnegger, Mozart, Haydn, Ravel (Tue). The Philip Glass Ensemble (Wed) (71 83 43).

September 19-25

NEW YORK

New York Philharmonic (Avery Fisher Hall). Zubin Mehta conducting. Frank Fursten violin, Cecilia Bartok, Emanuel (Tue). Zubin Mehta conducting. Andre Watts piano. Hans Schibler, Liszt (Thu). Lincoln Center (754 9202).

CHICAGO

Chicago Symphony Orchestra (Hall): Sir Georg Solti conducting. Jeanne Bosman soprano, Ann Murray mezzo-soprano, Anthony Rolfs Johnson tenor, Hans Spän bass, and Chicago Symphony Chorus directed by Margaret Hillis. All-Bethoven programme (Wed, Thur). (235 8111).

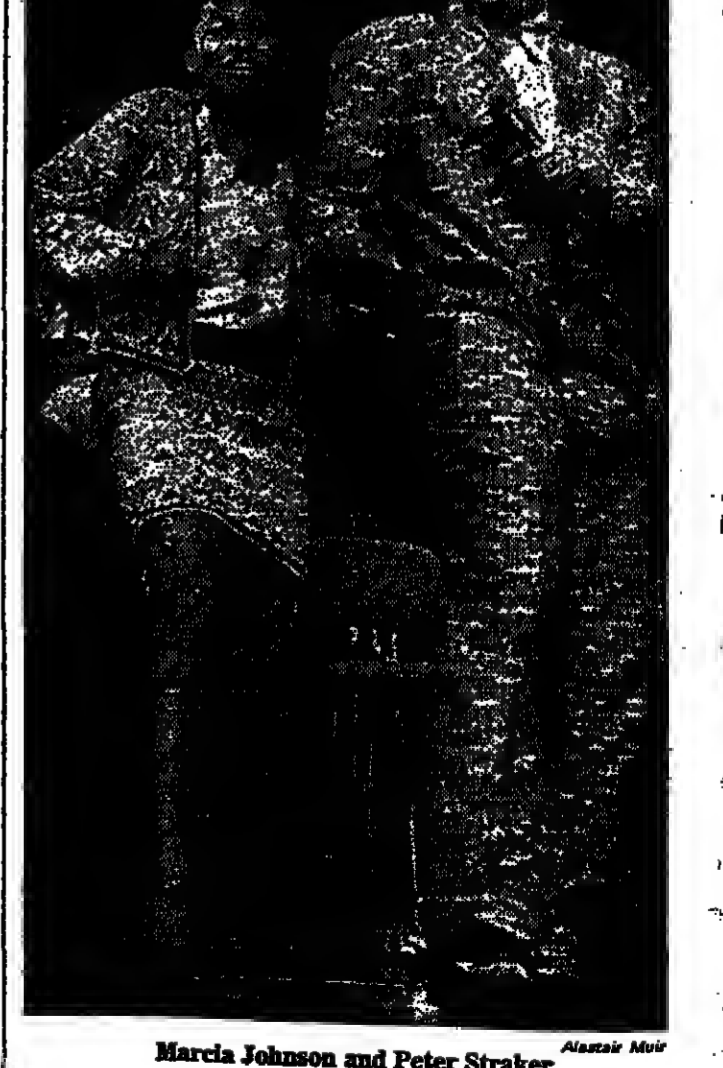
TOKYO

Bachauer-Symphoniker, conducted by Horst Stein. Mendelssohn, Mozart, Brahms, Elton Memorial Hall. Shown Women's College, Sang-en-ya (Mon). (232 7141).

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Marcia Johnson and Peter Straker

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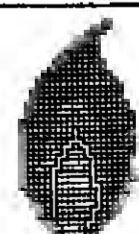
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SHARE INFORMATION OFFICE

THE VERDICT of the Smith-Baruch talks in Washington over the weekend is plain but equivocal. Both sides can see the makings of substantial agreements, notably in nuclear arms control, which would...

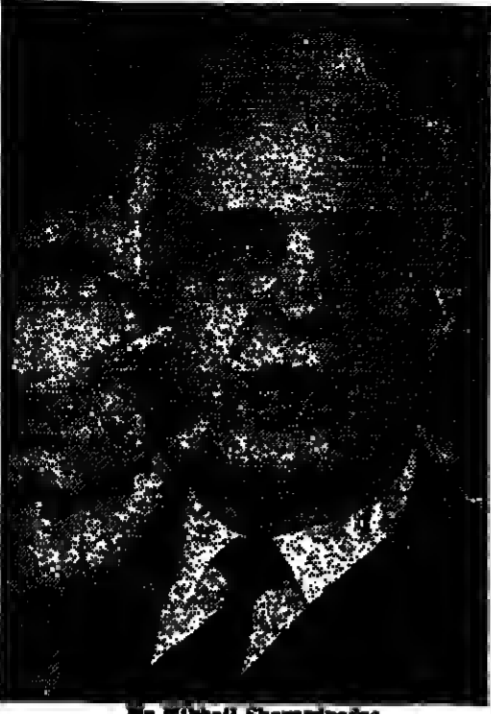
Obviously, there are objective stumbling blocks, in the shape of Daniloff, Zakharov and the 25 Russians. But even if we do not know who laid these traps on the path to the summit...

This does not mean that a second summit will not be held — the odds must still be in favour; nor that the two superpowers will not reach a major nuclear agreement...

For the past six years the world has been mesmerized by the erratic swings of the arms control drama. Will they, won't they, will they do a deal?

In 1984, under the twin pressures of Ronald Reagan's presidential campaign and the Soviet invasion of Afghanistan, the laboriously negotiated Salt 2 arms control agreement finally...

In January 1986, Mr Gorbachev was talking about a three-phase agreement to eliminate all nuclear weapons from all countries world-wide by the end of the century...



Mr Mikhail Shevardnadze

West summit. It was all very baffling. And then came the Daniloff affair, which was even more baffling.

Part of the explanation, no doubt is that President Reagan is not himself particularly well-informed on the technicalities of arms control, and is thus more susceptible to the pushings and pullings of the opposing barons within his Administration.

In his forthcoming Chatham House Paper on Arms Control, Lawrence Freedman divides arms controllers into two philosophical schools: the reformers and the managers.

Reformers believe that East-West tension derives from quite independent conflicts of interest and ideology; that not merely is there no "arms race" to speak of, but that the balance of mutual deterrance is fundamentally very stable; and that the purpose of arms control is to ensure that that stability is sustained by the predictability of mutual deterrance...

Foreign Affairs

Mr Reagan hesitates to go for the big one

By Ian Davidson

There is a conventional sort of wisdom which says that a right-wing Republican President is much better placed to do a deal with the Soviet Union, because he cannot be accused by Jesse Helms of being soft on Communism; that was why, in the last resort, the Democrat, Jimmy Carter, failed to bring home the second instalment of a process started by the Republican, Richard Nixon.

Now this conventional wisdom may have a basal grain of truth in it. But it does not satisfactorily encompass the contradictory strains inside President Reagan's philosophy, between a visceral Manichaeism about the essential nature of the relations between the US and the Soviet Union, and the Utopian optimism implicit in his arms control proposals.

For whereas President Reagan's arms control proposals are those of a reformer, his other pronouncements are those of a man who would not naturally believe that reform was possible, let alone that it could be negotiated with the Russians. If the Soviet Union is indeed an "evil empire," as he has claimed, or if the Russians are prepared "to lie, to cheat, to steal," then they do not seem ideal partners in the enterprise of reform.

Reagan will not, however, forswear, however tentatively, his precious Star Wars unless he can secure a major nuclear reform, as a deep cut. The launching of Star Wars in March 1985 brought the Russians in the end to a negotiation on radical nuclear weapons reductions; at the same time, however, it may have raised the stakes too high to be negotiable in political terms.

In this quandary, the US and the Soviet Union are both tugged by two contradictory impulses: on the one hand, the manufacture of conditions of conflict, so as to be able to blame the other side for a breakdown of the negotiating process; on the other, a salvage operation on the second summit, by seeking agreement in other, non-nuclear areas, where the stakes have not been raised too high.

On the other hand, too much has by now been said by both superpowers about the desirability of fundamental reform in the field of nuclear weapons (i.e. deep cuts), for it to be at all easy to dilute the political problem by retreating to mere management. Everyone can see the framework of a deal which is virtually ready to be picked up: a deep cut in offensive weapons, coupled with a long postponement of any deployment of President Reagan's Star Wars defences.

The reason is simple. Mr Gorbachev has no real interest in going through the demagogic hassle implied by a deep cut, unless he can win a major concession on Star Wars; and Mr



Mr George Shultz

Lombard

A tax reform nobody needs

By Michael Prowse

NOBODY CAN say that the British Treasury has not tried to sell its proposals for reforming family taxation. Since Mr Nigel Lawson, the Chancellor, unveiled the personal tax green paper on Budget day, no fewer than four Treasury ministers have made a total of five tub-thumping speeches explaining the virtues of the proposed changes. The standard of rhetoric has been unusually high: only last week, Mr John MacGregor accused critics of the proposals of wanting to treat married couples "on a par with strangers standing next to each other at a bus stop."

It would be tempting to argue that the Treasury's rhetoric has been sharp enough to see the flaws in Mr Lawson's plan. The truth is that many people are bored by tax reform and every day do not regard the present regime as too awful. If more people understood that, at a cost of £5bn, the Chancellor is planning to give every married couple two tax allowances, even if only one spouse is earning, more support might be forthcoming.

The cost of transferable allowances is a powerful argument against their introduction in the foreseeable future. Economic policy is, or ought to be, about making the best use of available resources. Would it really be right to spend £5bn on an indiscriminate benefit for married couples when 1.5m people have been out of work for more than a year?

Some ministers have argued that equal but non-transferable allowances could not be introduced because some families would be made worse off. With respect, this is nonsense. We already have non-transferability: the equality could be phased-in gradually so that nobody suffers in money terms. The Chancellor's own proposals, after all, also need to be phased-in slowly because they would hit two-earner couples. The great advantage of non-transferability is that it is cheap in keeping with the spirit of the social security reforms, the Government could target assistance on poor families with children that really need help. This is preferable to a tax break for marriage as such. Let's hope the green paper drowns in a sea of apathy.

Cost of TV quality

From the Technical Director, Thora EMI Ferguson
Sir—John Chittock's thoughtful article (September 18) on "The high price of picture quality" fairly describes the situation which faces some of today's television engineering managers. Those brought up in the limited range of standards of this industry's formative years are still having to come to terms with the periodic lack of marketing enthusiasm for developments equivalent to those which, in the past, might well have gone straight through to production. "So the nod."

However, in the case of HDTV many UK and other European engineers believe that this time they have "got it right" both in technical and commercial terms, with the proposal for a fully compatible gradual development of the "EAG" system into a truly high level of performance. "Evolution, not Revolution."

There are genuine technical reservations about the NHK/MUSE HDTV system, but there is no need to dwell on these. Suffice it to say that it really is much better suited to the Japanese or US studio (for which it was designed) rather than to the European home. Of equal or greater importance were the commercial objections: the very point which Mr Chittock was making, because of its extremely high introductory cost both to the broadcaster and to the viewer.

The Japanese system is wholly incompatible with anything that we have at the moment — or are likely to have. Everything, from studio equipment to domestic receivers would simultaneously have to be both new and expensive. "High definition" programmes could neither be received on existing sets, nor recorded on existing recorders; at least not without the simultaneous duplication of transmissions into the low definition standard as well. It would evolve into a low penetration service for the well-off, hardly television for the masses.

The European counter proposal, now elevated to Europa project status sponsored in this country by Thora EMI, and elsewhere by Philips, Thomson and Bosch, is specially designed to avoid this trap. At time a full facility for world-wide programme exchange is to be retained.

While consumers benefiting from the improvements will obviously have to meet additional costs, these would be borne progressively as the service or falls only upon those who wish to pay. Older MAC receivers awaiting replacement will continue to be of use

Letters to the Editor

to their existing owners without quality loss or programme denial.
Lessons have been learned. "Big Bang" may have a place in the City, but they are not always welcome in the living room.
D. R. Topping
Cambridge House, Great Cambridge Road, Enfield, Middlesex.

Pensioners' bouquet for Grand Met

From Mr P. R. Hyatt
Sir—In recent months your columns have been full of references to companies which have been reporting actuarial surpluses on occupational pension schemes. In many cases these have been used to provide improved benefits or reduced contribution rates to members still in service. Just occasionally a few crumbs are handed back to the pensioners, the real value of whose pensions has been eroded to 25 or 30 per cent of their value at retirement date in the early 1970s or earlier.
It is therefore encouraging to report that after personal representations made to Sir Stanley Grinstead and his board, Grand Metropolitan has responded in a most generous fashion. In very substantial repatriation for pensioners declining living standards this group has given increases ranging up to 100 per cent (for those retiring in 1975 and before).

British industry is often accused of turning a deaf ear to disadvantages minority groups. Perhaps directors of other listed companies should take note and follow Grand Met's example.
P. R. Hyatt
3 Alderley Court, Chesham Road, Berkhamstead, Herts.

Volatile market in electronics

From Mr K. Wharton
Sir—In your survey on Office Equipment (September 15) you rightly make the point that this is the growth industry of the 1980s, and probably the 1990s as well. The electronic keyboard and attendant microprocessors which are built into electronic typewriters, word processors, and personal computers are leading this growth. What is not so often recognised, however, is that these

fill me with confidence. Experience negates this, regrettably. As someone who has towed, sailed and boated in a whole variety of other forms on both the tidal and non-tidal Thames for close on 50 years, all I can say is that the quantity of debris have always been there. However, the river is probably somewhat cleaner in "health" terms than it was.

Substantial penalties for depositing litter may be partial solution, but that the cost of cleaning would be prohibitive.
Harry Purchase
Sharwood House, Coronation Rd, South Ascot, Berks.

Non-executives available

From Mr M. Priest
Sir—The Institution of Mechanical Engineers also holds a register list of experienced non-executive directors (Letters, September 9 and 16). In the past we have liaised with the Institution Directors and with the Promotion of Non-Executive Directors, but to our knowledge no placement has yet been made from our list.
The IMechE is willing to supply information and details to any company that would care to contact us.
M. Priest
Manager—Professional Services, Institution of Mechanical Engineers, 1 Birdcage Walk, SW1

Award for import prevention

From the chairman, Arthur Price
Sir—Slugging British manufacturers is a pastime only to the complete indifference of most members of the public as to where products they buy are made.
I would like to suggest two ways of correcting this unhealthy thinking.
Recently, changes in the preparation of major companies' balance sheets dictate that they have to state how much they export, and to where. Why not extend this legislation to include how much they import and from where?
Secondly, we have a Queen's Award for Exports. Admirable, of course, but why not one for import prevention? It would go to those who wish to remain British but who go unrecognised for their efforts that in a lot of cases are undoubtedly less profitable than taking the soft option of relying on imports.
A. J. M. Price
Britannia Way, Lichfield, Staffs

Debris always part of the Thames

From Mr E. Purchase
Sir—Under normal circumstances the letter from Mr Roy Watts (September 10) would

fill me with confidence. Experience negates this, regrettably. As someone who has towed, sailed and boated in a whole variety of other forms on both the tidal and non-tidal Thames for close on 50 years, all I can say is that the quantity of debris have always been there. However, the river is probably somewhat cleaner in "health" terms than it was.

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HAT Share Price: **138p**
94p

10.30 am, 25th September

Value of Offer is based on share price of BET at 3.30 p.m. on 19th September 1986.
HAT share price and HAT share price before offer are prices at 3.30 p.m. on 19th September and 21st July 1986 respectively.

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SECTION II - COMPANIES AND MARKETS
FINANCIAL TIMES

Monday September 22 1986

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INTERNATIONAL BONDS

Caution dissolves into unmitigated gloom

BY ALEXANDER NICOLL IN LONDON

AS THE Eurobond market's steep decline left even the week's smarter dealers looking disgruntled, one syndicate manager on Friday evening confided - "I think I'm going to take the bottle of sake out of my desk drawer and just drink it."

With some bonds falling two points on the day, the mood of caution which had prevailed for most of the week dissolved into unmitigated gloom.

For Eurodollar bonds, the poor state of US credit markets amid the current revival of inflationary fears is compounded by the weakness of the currency, which forces non-US investors to hold well back.

Not only that, but recent tremors in world equity trading have meant an even more than usually exciting time in the market for equity-related instruments, including warrants.

The warrant market is by its very nature extremely volatile - as can be seen by the chart - because war-

rent prices move far more sharply than those of the underlying shares due to their gearing effect.

Price movements have at times appeared irrational. The potential for losses and abuses has already prompted the Association of International Bond Dealers to consider moves to tighten warrant trading practices. Wild - though unsubstantiated - rumours have been flying around the market after the recent gyrations.

The issues which did brave the market last week did so on terms which would mostly have been viewed as quite generous not long ago. Prudential of the US, for example, came at a 75 basis point margin over US Treasuries as a Triple A rated borrower. Despite a good response, the market's Friday decline left the issue outside its fees.

Among other deals, Union Bank of Switzerland went for a broader distribution than usual - and faced

relatively well. A Banque Indosuez deal was locked up in Japan before it hit the European market. But a deal for DRB Asia did less well, while Citicorp's was viewed as aggressive for such a frequent borrower. As an example of how other issues have been facing the previous week's deal for Sweden was bid at discounts nearly four points below the issue price.

A \$150m issue on Friday for Norges Kommunalbank with Norway's guarantee, priced to yield 54 basis points above US Treasuries at launch net of fees, also suffered from the general malaise.

There was no retail interest in the market, and the only chances of success seemed to rest with specialty bonds such as the \$120m bull and bear bond launched on Friday in Denmark, the first such issue to be linked to the recently volatile gold price. The issue is divided into two equal parts, with the redemp-

tion amounts of each depending on whether the gold price rises or falls. The maximum redemption price for each tranche is 228 per cent and the minimum 50 per cent.

In West Germany, the bond market's overall lack of confidence kept all but one brave borrower away from new issues, even though a strong currency might have encouraged them. The D-Mark's strength did spark some interest from investors seeking currency gains and trading was quite lively at times.

Prices, however, changed little over the week, although some small gains were seen.

In Switzerland, quality issues and shorter maturities met some demand, and prices were little changed to slightly firmer. The market is suffering, however, from the high-profile problems of some issues, notably Dome Petroleum.

A formerly high-flying Swiss franc issue for ICI Pharmaceuti-

cal, which once traded as high as 178 on the back of the US company's stock price, is now at 100%. On Friday the same borrower launched yet another deal, this time in European currency units, which met a reasonable reception.

EUROBOND MARKET TRENDS					
Trenche (\$m)					
Primary Market	Bid	Offer	FRN	Other	
US\$	4,472.6	1.0	1,818.0	3,581.4	
FRF	1,883.1	0.4	6,212.0	2,386.2	
DM	2,177.0	77.1	226.5	226.2	
Yen	134.4	---	523.9	44.1	
Secondary Market	US\$	24,783.3	1,288.4	24,916.0	6,222.9
	FRF	24,726.1	1,750.8	21,252.2	6,282.7
	DM	11,982.5	291.8	3,407.3	4,688.5
	Yen	8,942.7	91.2	2,002.3	3,843.7
Cashed Euroclear					
	US\$	10,071.1	50,688.4	80,589.5	21,121.5
	FRF	14,877.9	41,948.5	61,121.5	25,137.7
	DM	10,274.5	12,823.5	23,137.7	16,436.5
	Yen	7,342.5	2,062.5	16,436.5	---

Week to September 18 1986 Source: AED

Saga Petroleum seeks capital

By Fay Gjester in Oslo

SAGA Petroleum, the Norwegian oil independent troubled by cash flow problems, is to seek Nkr 535m (\$74m) of fresh capital from the market through a one for two rights issue at par (Nkr 60 per share). This is believed to be the largest capital expansion issue ever launched on the Norwegian market. On Friday, Saga shares were quoted at Nkr 68.50.

The new issue, proposed by the board at the weekend, will be underwritten by a consortium comprising many leading Norwegian industrial, shipping and financial concerns, while Volvo of Sweden, which has a 20 per cent stake in Saga, has confirmed that it will take up its full share.

Members of the underwriting consortium are Elkem, Fred Olsen, Investa, Kosmos, Norsea, Norske Skog, and Norway's four largest commercial banks - Den Norske Creditbank, Christiania Bank, Bergen Bank and ABC Bank. The Kvaerner heavy engineering group, which owns 29 per cent of Saga, is not represented in the consortium. Earlier this year, Kvaerner gave Norsk Hydro an option - valid until end 1986 - to acquire its holding in Saga.

Shareholders will be asked to approve the new issue at an extraordinary meeting on October 29, and subscription lists will be opened from November 17 to December 1.

Saga, founded more than a decade ago, has yet to pay a dividend. Badly hit by the world oil price collapse, the company's revenue from its small stakes in producing fields, is far below its investment obligations in the many promising Norwegian licence areas in which it is a partner.

AIBD RULES

First steps towards UK self-regulation

BY ALEXANDER NICOLL IN LONDON

EUROBOND traders took a few minutes off from the market's pounding on Friday for a meeting at which they nodded through a set of rules that will undoubtedly be seen as the first steps towards the self-regulation soon to be required by UK legislation.

The Association of International Bond Dealers (AIBD) had good reason to be heartened. Failure to approve basic tenets of secondary market practice would have cast serious doubt on the AIBD's plan to act as a recognised investment exchange within Britain's new regulatory structure. This is still viewed with deep suspicion by many of the AIBD's continental members.

Market makers, however, have more reason than the general AIBD membership to submit to self-regulation. Although three-quarters of the AIBD's 630 member firms are outside the UK, 23 of the 122 market makers, now called reporting dealers, are based in London. They will soon face the choice of falling in with the new UK requirements or moving offshore.

The new rules, although watered down from the original proposals from the Secondary Market Makers Committee, represent a significant step towards ensuring a liquid and

transparent market for dealers and investors.

From January 2 next year, each reporting dealer will inform the AIBD electronically every evening of its closing bid and offered quotation for each bond in which it has committed to make markets. From March 2, each dealer will also disclose in the same manner the highest and lowest prices at which it dealt in each issue that day. This is far from the constantly visible prices which may eventually be displayed if the AIBD's study of US over the counter share trading is pursued, but it is a big advance.

Considerable power is vested in a ruling 15-member committee, which may compel dealing firms it considers not to be meeting their obligations. These also include making prices in a representative number of securities in market sectors, and in a minimum \$500,000 round lot for active dollar straight.

The most sensitive issue of all, a move to ensure that inter-dealer brokers trade only with reporting dealers, was settled by a compromise. Instead of disclosing the identities of parties to deals through brokers, the brokers themselves - providing they are each willing - will be subject to periodic audits.

EURONOTES AND CREDITS

Ireland wins fine terms on \$400m loan facility

BY PETER MONTAGNON, EURONOTES CORRESPONDENT, IN LONDON

A LONG awaited \$400m loan facility for Ireland surfaced in the Euro-credit market late on Friday. Ireland has awarded the mandate to Chase Manhattan and Mitsubishi Bank.

Terms of the deal are predictably fine. They include an annual facility fee of 4 basis points for the first two years, rising to five thereafter.

Drawings on the accompanying standby credit will bear interest at Libor (London interbank offered rate), although there will be a utilisation fee of 7 1/2 basis points if more than 25 per cent of the total is taken rising to 12 1/2 per cent on drawings amounting to more than 75 per cent.

The mandate follows a protracted and intensive bidding war in which Ireland had been expected to drive

the terms down to a level close to those now prevailing for French borrowings. Yet contrary to the perceived wisdom of the marketplace, the Finance Ministry in Dublin says it has not been especially concerned to compare its own terms with those of any other particular borrower.

More important has been the need to achieve terms that were fine without being so mean as to jeopardise the deal. In fact Ireland received offers of finance carrying an annual commitment fee of 4 points for longer than the two years it has now accepted. It chose not to accept them because, although the terms are fine, it still wants a success.

Financing loan conditions has become all the more difficult in a

market which has seen a heavy compression of the terms available to all top-rated European sovereign borrowers. Ireland is traditionally seen as a much less attractive credit than France. Yet, it is launching a deal on terms to lenders only slightly more generous than those agreed by Credit Foncier before the summer holidays.

Against this it has a number of factors in its favour. First, unlike France, it does not traditionally borrow in this form so its paper has some rarity value in a market where deals are in short supply. Second, it has been pre-paying much of its traditional bank debt and refinancing it in the bond market. Although this makes no difference to its total foreign debt, which is still growing, it does mean that less debt

is held by bank creditors than before.

Finally, the deal is structured in a way that seeks to avoid requiring any individual bank to put up an excessively large commitment. The arranging banks are now seeking to put together a group of 20 lead managers underwriting \$30m apiece to spread the load.

Meanwhile the Euronote Association has decided to postpone for another three months discussion of a benchmark index for the Eurocommercial paper market. Despite mounting pressure for such an index, the association feels there are several potential drawbacks. Not least is the fear that the development of an index could deprive the market of its ability to price paper at rates at which it could be sold to investors.

So far the association cannot see its way to the construction of an index such as the US Federal Reserve Composite Index for commercial paper in New York. This index is calculated by the Federal Reserve on the basis of a weighting that is a tightly kept secret. So far no organisation has been found that could perform the same job in the Euro-market; the fear is that a commercial organisation might be persuaded to give top quality borrowers an excessive weighting in the index. Since few borrowers, if any, would be prepared to sell paper at anything but a few basis points above the index, this would mean that the paper of lesser-rated borrowers would become impossible to market.

All of these securities have been offered outside the United States. This announcement appears as a matter of record only.

New Issue / August, 1986

U.S. \$100,000,000

East River Savings Bank

Collateralized Floating Rate Notes Due August 1993

The interest rate on the Notes for each quarterly period will be the sum of 0.05% per annum plus the arithmetic mean of London interbank offered quotations ("LIBOR") for three-month Eurodollar deposits prevailing two Business Days before the beginning of each Interest Period. The interest rate for the Initial Interest Period will be 5.925% per annum.


Salomon Brothers International Limited	Bankers Trust International Limited
Banque Bruxelles Lambert S.A.	Banque Nationale de Paris
Banque Paribas Capital Markets Limited	Credit Suisse First Boston Limited
Goldman Sachs International Corp.	Kidder, Peabody International Limited
Mitsui Trust International Limited	Morgan Stanley International
The Nikko Securities Co., (Europe) Ltd.	Nippon Credit International Limited
Shearson Lehman Brothers International	Soditic (Jersey) Limited
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These Bonds having been sold outside New Zealand and the United States of America, this announcement appears as a matter of record only.

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September 1986



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INTERNATIONAL CAPITAL MARKETS

US MONEY AND CREDIT

Inflation becomes public enemy number one

THE LONG-SUFFERING bears are finally getting their revenge. For years they have been eagerly and expensively awaiting the "crash landing" of the dollar which seemed inevitable on fundamental economic grounds.

US MONEY MARKET RATES (%) and US BOND PRICES AND YIELDS (%) tables showing various rates and yields for different terms and maturities.

A few months ago it would have seemed inconceivable that the dollar might fall by 5 per cent, as it has in the past month as part of the selfsame process that has raised US interest rates by 85 basis points.

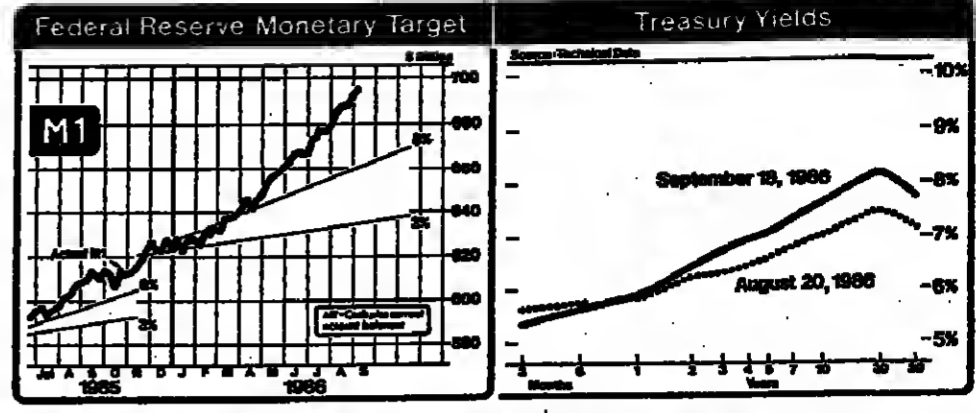
occupation with inflation, which has suddenly re-emerged as public enemy number one. To some extent this marks a welcome return to reality in market psychology.

The Federal Reserve Board's cutting of short-term interest rates may have been encouraging, but the basic balance of supply and demand in the bond market has deteriorated as the dollar has fallen.

Despite all this gloom, however, there are a number of reasons for believing that the market has overreacted—at least on bond prices.

It is the rise in manufactured import and commodity prices, which results from the devaluation of the dollar. In principle, devaluation need not set off an inflationary spiral.

Assuming inflation can be limited to the four to five per cent range, the next issue that arises is whether the long-term real interest rates of 2.5 per cent to 3.5 per cent implied by present bond yields are realistic.



longer time frame it seems quite unlikely that investors will secure real rates which average more than 2 1/2 to 3 per cent over the course of a business cycle.

slowly because the Fed will tend to ease but much more importantly, because of the falling demand for credit and the increasing savings which accompany a recession.

slowly because the Fed will tend to ease but much more importantly, because of the falling demand for credit and the increasing savings which accompany a recession.

UK GILTS

Fall quickens as pound sinks against DM

PRIMARY DEALERS and inter-dealer brokers in the new structure of the gilt market must be hoping that their baptism of fire next month is less furious than the past week has been.

It is also unlikely to do much good to the US bond market, since international investors are rarely encouraged by the prospects of an accelerated depreciation.

It is West Germany shows no signs of relenting on interest rates, however, the message may still get through that tempers need to cool before the meeting of the Group of Five Finance Ministers in the US on Friday.

The fall has been, nevertheless, taken place and it is a brave man who believes that sterling is in any shape to reverse more than a small portion of the slide.

Mr Poehl, however, has raised the hackles of several other central banks in the European Monetary System whose currencies, like sterling, have been put under increasing pressure by the D-Mark surge he triggered last week.

Mr Bill Allen of Greenwell and Capel-Cure Myers have both argued that the rules would impose an unduly heavy penalty on the building societies (which currently hold around £10bn of gilts under five years and up to £1bn over five years) for holding any stocks with over three years to maturity.

George Graham

FT/AIBD INTERNATIONAL BOND SERVICE

Table listing various international bonds including US Dollar, UK Gilts, and other international securities with columns for Issued, Price, and Yield.

Advertisement for Dansk Eksportfinansieringsfond (Danish Export Finance Corporation) featuring a large graphic of 'U.S. \$100,000,000' and '8 per cent. Notes due 1991'. Lists various international banks and financial institutions.

Continuation of FT/AIBD International Bond Service table, listing various international bonds and their details.

10th July, 1986 All of these securities have been sold. This announcement appears as a matter of record only. © The Financial Times Ltd. 1986. Reproduction in whole or in part is prohibited without written consent.

INTERNATIONAL CAPITAL MARKETS AND COMPANIES

India strengthens airline boards

BY JOHN ELLIOTT IN NEW DELHI

TWO OF India's most prominent younger industrialists have been made chairmen of the country's two nationalised airlines as part of a shake-up which replaces top civil servants with private sector, non-executive directors a year before the companies are to be merged.

Mr Rahul Bajaj, 47, chairman of Tata Industries and heir apparent to the leadership of the family industrial empire, has been made chairman of Air India, the international carrier, which was founded by his cousin, Mr J. R. D. Tata, now 82, as a private sector airline 40 years ago.

Decline in earnings at Minorco

By Our Financial Staff

MINERALS AND Resources Corporation (Minorco), the Bermuda-based international investment vehicle of the Anglo-American group of South Africa, has reported a decline in net earnings to US\$72m for the year ended June 30 from \$105m in the previous year.

At the operating level, there was a 56 per cent increase in earnings to \$71m from \$45m. Earnings from operations in the current year are expected to be lower as a result of reduced interest income.

can you for example expect them to react on fare structure changes after sharp falls in oil prices?" asked Mr Jagdish Tytler, Minister of State for Civil Aviation.

He expects to receive reports from study groups in the middle of next month, and then envisages a three-phased merger programme, along with an Act of Parliament next year which will reconstitute the boards.

First mutual fund launched

SMALL SAVERS in India are to be encouraged to invest in the expanding stock markets through the country's first mutual fund, which was opened to subscribers last Friday, reports John Elliott.

Kosmos buys 49% of Bergesen

BY OUR OSLO CORRESPONDENT

KOSMOS, one of Norway's largest companies with interests in shipping, rig-owning and industrial operations, has paid Nkr 1.17bn (\$162m) in a provisional agreement to buy 49 per cent of Bergesen, a rival shipping group which was recently floated publicly.

If the initial deal goes through, Kosmos will offer to buy the outstanding 51 per cent of Bergesen at a comparable price, that would value the whole company at Nkr 2.3bn, making the takeover potentially the largest yet seen in Norway.

A potential obstacle to the deal lies in the option held by the joint general managers of Bergesen, Mr Petter Sundt and Mr Morten Bergesen, who are coming to buy the shares pro-

visionally sold to Kosmos by other members of their families. Mr Sundt, who personally owns 20 per cent of Bergesen, and Mr Bergesen, who owns 10 per cent, first learned of the share sales last Friday, when Kosmos shares were suspended on the Oslo Stock Exchange after rising for several days on bid rumours.

They held talks on Friday evening with Mr Otto Grieg Tideman and Mr Bjorn Bettum, chairman and managing director respectively of Kosmos, in what was described as a positive atmosphere.

Mr Sundt said after the meeting that he and his cousin would consider exercising their option to buy the shares offered to Kosmos by four other members of their families. They have a fortnight in which to raise the money to do so.

Bergesen is considered to have become an attractive takeover target since it sold a large block of shares in Kraemer, the heavy engineering group, to Elkem, the mining and metals company, for around Nkr 500m last month. This and other deals have left Bergesen with liquid assets of some Nkr 2bn.

Bergesen's public flotation, planned more than a year ago, has reorganised six privately-held shipowning companies into a single company. The intention was to attract outside capital to the group and to allow it to diversify—possibly into land-based, non-shipping activities, as Kosmos has successfully done.

Dome Petroleum asks for debt relief

By Bernard Simon in Toronto

DOME Petroleum, the ailing western Canadian energy producer and one of the world's biggest corporate debtors, has asked its 56 creditors for a wide range of concessions to save the company from liquidation.

The proposals, contained in a 37-page recapitalisation plan, include conversion of some of the company's C\$60n (\$4.3bn) debt to preferred shares, concessional interest rates and an extended repayment period.

Mr Howard MacDonald, chairman, said the plan "would see the lenders get much more of their money back than they would be by forcing a liquidation. We are convinced that, in the long run, oil prices will recover and it's a matter of surviving the downturn."

Some of the company's lenders, which include major US, Canadian, European and Japanese banks, gave the plan an initially cool reception. A senior official at one Canadian bank said that the plan is "only a framework and a fairly scanty one at that."

He predicted that the banks would act as a more cohesive group than they have in previous negotiations with Dome, "because no lender is high and dry."

The plan makes no mention of specific amounts of debt which Dome hopes to convert to equity, nor does it disclose details of re-scheduling or interest rate targets.

The company said that two ratios, still to be negotiated with lenders, would be used to determine interest rates on various portions of each lender's debt and the amount of debt to be converted to preferred shares.

Mr Jim Hamilton, energy analyst at the securities firm Bell Gonnell of Calgary, estimated that Dome's assets would support only C\$2.5bn in loans or roughly 40 per cent of the total. He predicted that the lenders would eventually agree to a recapitalisation plan rather than allow a receiver to oversee the liquidation of the company.

In terms of the plan, payments of both interest and principal will be based on cash flows from assets supporting various groups of debt. Any debt which cannot be serviced from cash flow would be deferred

Ralston approaches food group

BY WILLIAM HALL IN NEW YORK

RALSTON Purina, the world's largest pet food producer, has entered the battle for Anderson, Clayton, the Houston food processor and has announced that it is negotiating to buy the company for \$75m.

The news that Anderson, Clayton and Ralston Purina were having takeover talks came less than 15 minutes after a Delaware court blocked Anderson, Clayton's controversial recapitalisation plan.

attack from a group of investors led by Bear Stearns and Gross and Co, has offered to buy back two-thirds of its shares for \$60 a share in a bid to defeat a \$36 a share from the outside investor group.

However, the Delaware chancery court has barred Anderson, Clayton from proceeding with the partial buy-back offer until October 10. The court's decision was the second-

legal setback for Anderson which on Thursday was ordered to remove various "coercive" anti-takeover measures. In particular, Anderson wanted to require an 80 per cent approval by shareholders of any plan to acquire control of the company.

Mr William Stritt, Ralston Purina's chief executive, indicated that he intended to recommend to his board the purchase of Anderson, Clayton at a price of \$82 in cash per share, subject to negotiations.

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UK COMPANY NEWS

Hutchison has 5% stake in Pearson

BY DAVID GOODHART AND DAVID DODWELL

Pearson, the industrial, banking and publishing group which owns the Financial Times, has entered negotiations with Hutchison Whampoa, the Hong Kong based conglomerate controlled by Mr Li Kashing, which could lead to a major shake-up of both companies.

Hutchison is a heavy user of fossil fuels and Pearson's oil and all services division might be of interest. Mr Murray also mentioned Lazard's merchant bank (of which Pearson owns a part) and various leisure interests as potential acquisitions.

Goal Petroleum losses increase in first half

Goal Petroleum, oil and gas explorer and producer, saw its financial health of the company in good. Operating cashflow from present production has more than covered overheads.

Elders may have to pay dearly to brew Fosters

Elders Ltd, which last week bought Courage for £1.4bn, may have to pay dearly for the right to brew its own Fosters lager in Britain.

Grand Metropolitan subsidiary Watney Mann has had the licence to brew and market Fosters for the past five years and retains the licence until 1996.

Mr Tim Hailford, GrandMet's director of public affairs, confirmed yesterday that the company would be reluctant to part with Fosters. "It's a very good brand, and we have spent a lot of money building it up," he said.

Desoutter Brothers unchanged at £2.45m

AFTER THE fall in profits in the second half of last year increased sales helped Desoutter Brothers (Holdings) recover in the six months to the end of June 1986. Turnover for this period rose by 21 per cent from £15.69m to £19.02m with taxable profits coming out almost unchanged at £2.45m against £2.46m.

Wordplex almost £2m in red at interim stage

Wordplex Information Systems, the office automation group which ran into heavy losses last year, has announced pre-tax losses of £1.95m for the six months to June compared with pre-tax profits of \$85,000 in the first half of 1985.

Dares maintains progress

PROFITS continued to improve at Dares Estates and were £163,000 in the first half of 1986 compared with a loss of \$35,000 in the comparable period of last year. Year-end profits were £12,000.

Horace Cory ahead

Pre-tax profits at Horace Cory, chemical colour manufacturer, increased from \$45,374 to £140,947 in the six months to June 30 1986. The interim dividend is raised from 0.2p to 0.3p net—last year's total was 0.5p from pre-tax losses of £223,945 (£18m profit).

Dinkie Heel profits slip

Dinkie Heel, footwear components maker, attributes its continuing profits decline to the costs of integrating the rubber business acquired last November with its established activities.

Hawker Siddeley

Hawker Siddeley's interim results will be announced on October 22 and not today, as stated in Saturday's Results due next week column.

Citicorp Finance PLC £150,000,000 Guaranteed Floating Rate Notes Due December 1997

Lazard ruling upsets pension funds. TSB's merchant bank advisers, Lazard Brothers, have angered several pension funds with split management by insisting that only one application for shares can be made for one fund.

DFL 75,000,000 Floating Rate Serial Notes due 1989/90/91. FRIESCH-GRONINGSCH HYPOTHEEK BANK N.V.

BOARD MEETINGS. TODAY: Interline-Boston, W. Conning, Johnsons Group, etc.

J E England. The shares in J. E. England, the produce supplier and convenience food merchant, were suspended on the stock market on Friday at 4p pending an announcement.

F.T. Share Information. The following securities have been added to the Share Information Service.

SHARE STAKES. Changes in company share stakes announced over the past week include: Woolworth Holdings, etc.

Eni International Bank Limited U.S. \$200,000,000. Guaranteed Floating Rate Notes due 1993.

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PENDING DIVIDENDS. Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table.

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Electronic Financial Services. The Key to Competitive Advantage. 15 & 16 October, 1986.

AEGON ECU 101,000,000 AEGON N.V. 7 1/2% Bonds due October 15, 1995.

FINANCIAL TIMES STOCK INDICES. Table with columns for dates (Sept 19, 20, 21, 22) and various indices (Government Secs., Fixed Interest, etc.).

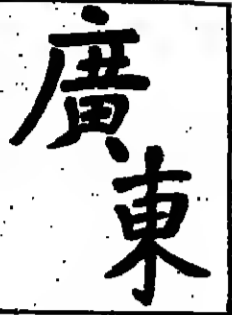
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FINANCIAL TIMES SURVEY

Monday September 22 1986

Guangdong



This outward-looking province, which has attracted 60 per cent of the foreign investment in China, is the key to the country's modernisation.

Channels for trade

IF THERE is anything that sets Guangdong apart from every other region of China, it is its tendency to look outwards. The province's distinctive internationalism contrasts sharply with the deep-rooted introversion throughout the rest of the country — and has always ensured that Guangdong plays a unique role in China's development.

Cantonese businessmen like Xie Qingqiao were sending home letters describing the streets of Calcutta, Bombay, or even London — full of awe at the existence of piped water supplies — more than 200 years ago. The port of Canton — the province's capital is nowadays called Guangzhou — was receiving foreign ships as early as the 16th century, while Britain's tax-free trading rights in Canton were granted after British sailors under Captain George Anson helped to put out a major fire in the city.

But the most powerful internationalising influences — and those most significant today — were the Nanjing Treaty, signed after crushing defeat in the first opium war, which forced Peking to open up Guangzhou and four other ports to foreign trade; and the successive waves of emigration that accompanied the chaos and anarchy that has so frequently erupted in China during the past century.

Of the 30m Chinese who have fled the mainland in search of stability and prosperity since the middle of the 19th century,

more than half have come from Guangdong. Today, almost 5m of them are in Hong Kong, while they form substantial communities throughout South East Asia, in Australia and on the west coast of Canada and the United States.

These groups of emigrants may have left China at different times and for different reasons, but today they are fulfilling a critical role in China's development — acting as the channels for trade between China and the rest of the Pacific, providing donations and remittances

By David Dodwell

that are funding large-scale infrastructure development, and investing in the joint ventures that are being sought so keenly by Peking to modernise the country's creaking industrial base.

Guangdong, as the home of such a large proportion of these overseas Chinese, has reaped the greatest rewards since China's doors were reopened to foreign trade and investment in 1978. These overseas "compatriots" have been an important stimulus for growth in the province — and have played a significant part in making Guangdong China's leading exporter (expected to amount to more than US\$3.5bn this year, ahead of both Shanghai and Liaoning), and one of the country's most affluent areas.

It was not accidental that when Deng Xiaoping established four Special Economic Zones (SEZs) as catalysts for development, three were sited in Guangdong. Now is it an accident that the Pearl River Delta at the heart of the province, and cities around it, have been granted privileges similar to the SEZs.

The province has attracted about 80 per cent of the total foreign investment in China — and 80 per cent of this investment has come from Chinese residents in nearby Hongkong. Last year alone, foreign investment amounted to US\$2.3bn. In addition, overseas Chinese are understood to have funded about 2,000 new schools, 100 hospitals, dozens of bridges, and hundreds of kilometres of property-surfaced roads.

The impact of these overseas Chinese links is most powerfully seen at the grass-roots level. A city of 1.2m like Dongguan boasts 800,000 overseas Chinese. From among those in Hongkong has come investment in 1,700 factories set up simply to process Hongkong goods. These factories last year employed 100,000 people in the city, and earned processing fees of \$68m.

Looking at the whole province, it is estimated that there are 15,000 factories involved in processing. They employ about 450,000 people, and last year earned more than \$300m — about 10 per cent of the province's total export earnings. These advantages have not



Canton, the province's capital, has long been at the forefront of Guangdong's links with the rest of the world. There is confidence that the province will cope with the "pounding waves" of new influences.

been without their drawbacks. Rapid progress has created anxiety among the more conservative leaders in Peking, who value ideological purity more highly than material affluence, and see corruption and profligacy emerging as the command economy is dismantled in favour of the market economy. Governor Ye Xuanping exudes confidence that the people of Guangdong can withstand the three "pounding waves" that have deluged the province as it has opened up to the outside world — material affluence, free market practices, and corrupt practices. But it is clear that a number of powerful figures in Peking are more sceptical.

The national scandal a year ago over the illegal import of 80,000 cars through Hainan

Island — which falls into Guangdong province — was proof to many in Peking that such scepticism is justified.

The sudden surge in imports in late 1984 and early 1985, which wreaked such damage to China's trade balance, and so depleted the country's foreign exchange reserves, was also closely linked with Guangdong's open doors. The province's traditional trade surplus of about \$1.4bn was slashed to a mere \$230m as imports rocketed from \$1.2bn in 1984 to \$2.8bn last year.

The strict foreign exchange curbs imposed by Peking in the wake of this upset were keenly felt in Guangdong, where many legitimate foreign ventures had been established on the assumption of flexible foreign exchange policies.

As China's imports now appear to be back under control, Peking has recently signalled that it is willing to allow the reintroduction of more flexible foreign exchange policies. Guangdong officials, who report that over 70 per cent of ventures are facing difficulties in balancing their foreign exchange commitments, no doubt feel that the relaxation comes not a moment too soon.

The experience of the past year nevertheless has reminded officials throughout the province that they bear a heavy responsibility to demonstrate that the open door policies, and market economic mechanisms, can succeed on terms acceptable to Peking.

This is nowhere more evident than in the Special Economic

Zones, which have been the butt of severe criticism over the past year. Shenzhen, by far the most substantial of them, has been attacked for committing too much investment to construction and tourist development, and for failing to attract enough high technology investment, and falling to export enough.

Leaders in Shenzhen have responded by insisting that a city that started six years ago as a fishing village of a few hundred people needs substantial investment in infrastructure before foreign ventures can be attracted into the zone. For the time being, Peking has accepted their argument, but the pressure to show returns — in terms of export earnings and technology transfer — is now acute.

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Of particular concern, therefore, is the continuing shortage of electricity — and poor communications. Manufacturers rightly argue that they cannot reach optimum productivity if they face the constant threat of power cuts.

The province's electricity grid is able to meet just over 60 per cent of current industrial needs — a problem of crisis proportions that is not going to be solved quickly. More than RMB Yuan 5bn is to be spent over the next five years to add extra electricity generating capacity, but there can be no certainty that this will match the extra demands being made as industry continues to expand rapidly. Links with the Guangxi provincial grid, due by 1990, cannot come a day too early.

Given this acute power shortage, there can be no surprise that Guangdong people share none of the concerns of Hong Kong people about the planned construction of the Daya Bay nuclear power plant, which is due for completion after 1992. Hong Kong's 5.5m people have more generating capacity available for their use than the whole of Guangdong province, with more than 82m people.

In general, despite the concerns of the more xenophobic in the leadership in Peking, Guangdong has so far amply managed to justify its achievements. The contribution of rice to the state may be down, but this is the result of deliberate policy, and has been offset by a 29 per cent surge in sugar output. Sugar is in desperately short supply in China, and there can be no disputing that land

CONTINUED ON PAGE 3



Guangdong Leather Garments

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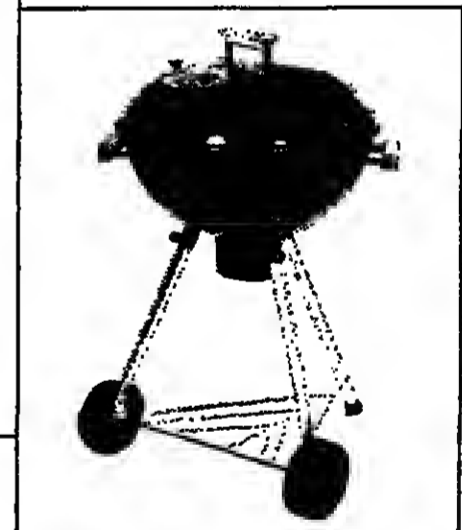
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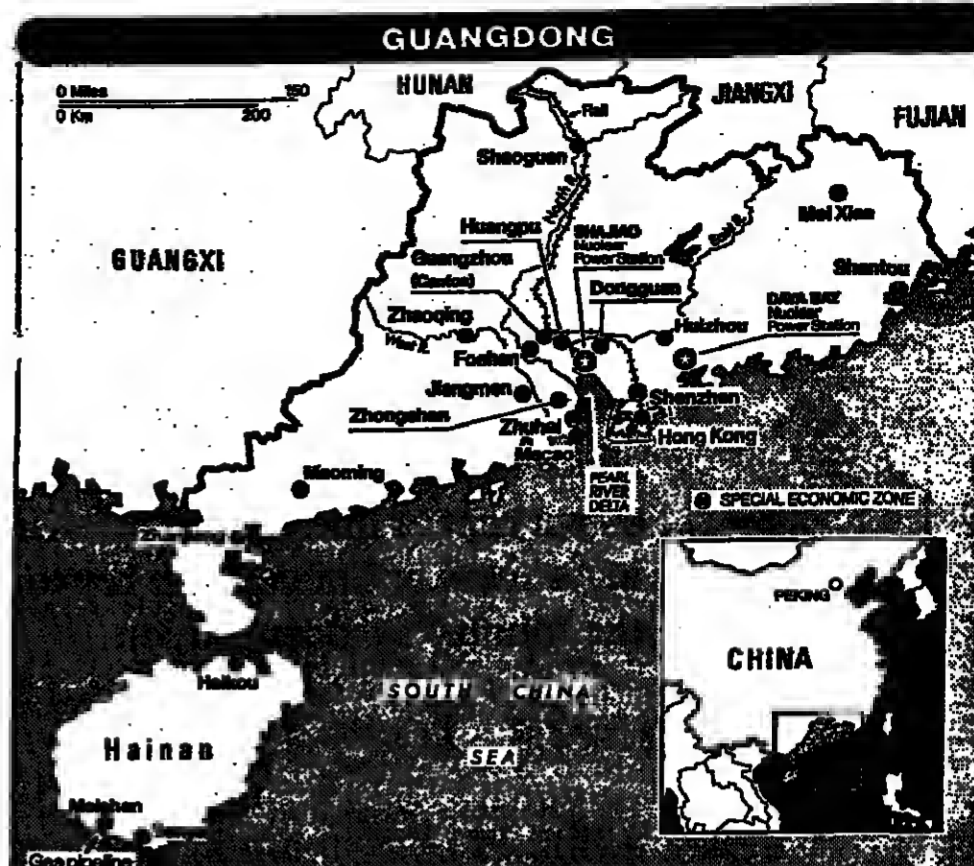
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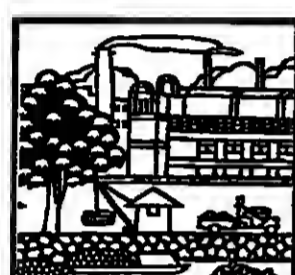
GUANGDONG 2



Shijiao B power station under construction on the Pearl River. Power is in very short supply because of the demands of industry



Economy at cutting edge of open-door policy



The province is now China's leading exporter, but the advances have also brought pressures.

IF CHINA is to achieve the "take-off into sustained economic growth" that is so often talked of by development economists, then it will almost certainly begin in Guangdong.

The province this year has overtaken Liaoning and Shanghai to become China's leading exporter. It accounts for about 60 per cent of the total foreign investment in China since 1978.

Its farmers are among the most productive and the most affluent in China. Its overseas Chinese links give the province access to foreign expertise and foreign technology on a scale unimaginable in other parts of the country.

At the same time, however, these advances have confronted the province with problems and pressures unfamiliar in many parts of the country. Because it is at the cutting edge of Deng Xiaoping's commitment to an open door economic policy—with three of China's four Special Economic Zones—so it carries a burden of responsibility to demonstrate to doubters in Peking and elsewhere that the policy can work.

Ahead of the other provinces it has had to cope with what governor Ye Xiangping calls the three "pounding waves" that have been linked with rapid development. These are: absorb-

ing material affluence without destroying the socialist ethic which underlies modern Chinese society, avoiding what many in the Chinese leadership see as the corrupting influence that comes with substantial direct contact with foreigners and foreign culture; and dealing with profiteering, smuggling and other problems linked with loosening up the economy to market forces.

It is also having to deal with economic overheating, and with the acute infrastructural strains that have accompanied rapid economic growth—so much so that heavy infrastructure spending is the highest priority in the new Five Year Plan period that began this year.

Power is in extremely short supply, while the province's roads are hopelessly overloaded. The province's telephone system, after heavy investment over the past five years, is unquestionably the best in China—but is still far from coping with the demands being made on it by Guangdong's manufacturing industry.

Governor Ye likes to think of the past five years as "the most thriving" period that Guangdong has seen since liberation. There would be an element of self-congratulation in this claim if the statistics did not bear him out.

The province's agricultural and industrial output value reached RMB Yuan 69bn in 1985, after an average annual growth of 13.6 per cent since 1980. Household incomes averaged more than RMB Yuan 2,000 a year in 1985, compared with a national average of about half this.

Those who are rightly suspicious of Chinese statistics need only spend a day travelling on the province's still basic roads to see proof of them in the hectic pace of construction taking place in literally hundreds of towns and cities.

In spite of being one of the rice-bowls of China, Guangdong in the recent past has put the

brakes on rice production. Output actually fell in 1985—by 12 per cent to 17.5m tonnes. A rice committed to rice has been cut back as farmers have been encouraged to diversify into cash crops.

The greatest change resulting from this shift has been in sugar cane production. Output rose by 28.7 per cent last year to 22.4m tonnes in an effort to reduce the country's acute sugar shortage. Jiang Taihe, head of production planning in Guangdong's Agriculture Commission, described this surge as "probably the province's main contribution to the nation."

At the same time, the production of fruits and vegetables has also risen rapidly, while Guangdong is China's main domestic supplier of aquatic products,

supplying almost 1.2m tonnes last year.

Guangdong also leads China as a base for light industry—without doubt a result of its closeness to Hong Kong, and of the large amount of processing for Hong Kong manufacturers that takes place in the province.

In 1985, light industrial output amounted to RMB Yuan 39bn—almost 29 per cent up on 1984, and accounting for about a quarter of China's total light industrial output. About 15,000 factories are thought to be involved in processing for Hong Kong manufacturers—accounting for almost half a million jobs, and earning 10 per cent of the province's US\$5bn foreign exchange earnings in 1985.

Given Guangdong's reliance on foreign investment—and the undoubted link between steady investment over the past five years and the province's emergence as China's leading export—it is not surprising that its leaders have been among the most concerned over a reported 20 per cent slump in overseas investment in China in the first half of this year.

They have been equally concerned about studies suggesting that a large proportion of the province's foreign joint ventures are in difficulties.

Yang Ziyuan, vice-mayor of Guangzhou, recently revealed that 70 per cent of joint ventures examined in a survey were facing difficulties in balancing their foreign exchange—and that 80 per cent of foreign exchange earnings in the joint ventures came not from exporting, but for sales inside China for payment in foreign exchange.

"The problem of reaching foreign exchange balances has reached a critical stage for the survival of many enterprises,"

Leaders in the zones have defended themselves by insisting that since they all began as greenfield sites seven years ago, a large proportion of investment in their early years must inevitably be on building up infrastructure, and educating a workforce that can handle high-technology investment.

The processing work that has played such a large part in early development, doubtless provides untrained workers with factory skills they previously lacked. Heavy tourist investment has been demanded because of the need with which this kind of investment can generate foreign exchange, and because tourist amenities do not require highly-skilled labour.

The leadership in Peking appears to have accepted the case presented by leaders in the SEZs—but only for the time being. They face increasing pressure in future to attract high-technology industries, and to make significant progress in exporting to foreign markets.

The problem of power shortages has been acute in Guangdong, and a serious constraint on growth. Government officials estimate a 40 per cent shortfall in supply, which leaves many companies forced to operate on four-day weeks, weakened by numerous unscheduled black-outs.

The province had a total installed capacity of 4,188 MW at the end of 1986—less than Hong Kong, which has a population less than one tenth that of Guangdong.

programme is intended to bring a further 2,900 MW into operation by 1990. In addition, five high-tension lines linking Guangdong to the Guangxi provincial grid should help to ease shortages. According to Li Liel, director of Guangdong's Economic Commission: "The problem will not have been totally solved by 1990, but it will have been greatly eased."

A further problem linked with rapid economic growth has been inflation. Province-wide, the retail price index rose by 13.6 per cent last year, according to the Provincial Statistics Bureau.

Workers' living expenses rose by 17.1 per cent, mainly as a result of a 48 per cent surge in the price of fresh vegetables, and a 29 per cent increase in prices for meat, poultry and eggs. Workers' wages at the same time rose 85 per cent, the Statistics Bureau says, suggesting that workers saw a 7 per cent rise in real spending power.

Given the artificial nature of pricing for most products inside China, it is difficult to interpret the significance of such inflation figures—except to say that there have been occasional public outcries about rising prices which make the issue as politically sensitive in Guangdong as it is overseas.

It is probably not just inflation that has created anxiety, but the simple fact of such hectic change. Governor Ye talks of how so many Guangdong people have had to learn to run so fast, so suddenly, that they have tripped, or fallen behind. He has talked of them "feeling dizzy" at the first experience of the material affluence that has washed into the province from outside.

The way in which Guangdong people respond to the challenges that have been associated with this rapid economic change will in many ways set the pattern for the rest of China in years to come.

Modern centre for Canton Fair

OLD CHINA bands, given half a chance, could doubtless draw many a gin and tonic reconnoitering tales of the Canton Fair in the best old days. Of scribbling into the exhibition halls through ranks of Red Guards brandishing Mao's Little Red Book and calling for the death of all capitalists.

Today, both Canton, and its fairs, are transformed places. Gone are the days of traders camping on the lobby floor of the Dongtang or Baiyun hotels. Instead visitors can snoop memorabilia in plush French restaurants, sip hotels as luxurious as any in the world. The modern new exhibition centre is fronted by a 100-yard mirror wall.

In place of swarms of bicycles, the city's streets are choked with Toyota Lincolns taxis cruising for business. If you are going to be accepted there it will not be by a book-waving zealot sporting badges of Mao Tse Tung, but

more likely a black market money changer, or a prostitute.

The fair is considerably less important than it was 10 years ago, says John Kizama, a trader for Diamond Shamrock of the US who has been attending the fair long enough to match tales with the best of them. "It's still important for the 'one-stop' China trader, or someone who has never done trade with China before. There is nowhere else in China where you can get the same comprehensive idea of what the country has to offer."

The twice-yearly fair—each lasting 28 days—will also in all probability be given a special boost this autumn, as officials celebrate the 60th fair since they began in 1957.

But as China has opened up the doors to foreign trade, allowing cities throughout the country to conduct trade directly with the outside world, so the fair's monopoly of China's foreign trade has

been steadily diluted. Last year, the spring and autumn fair—properly called the Chinese Export Commodities Fair—together accounted for over 50 per cent of exports (exact figures are notoriously difficult to get, since many deals "signed" up at the fair are never completed)—which is certainly not insignificant for ever 500 in exports.

Today, as its title suggests, the fair is almost entirely an export fair. The single main exception to this is chemicals, which are still imported on a substantial scale through the fair.

The City's modern hotels, which can have an empty ring to them for large periods of the year, are still full to bursting for periods of the fair. Last autumn, a total of 27,000 traders came to Can-

ton—two thirds of them from Hong Kong.

While there are many who would say that doing business at the fair is infinitely easier today than it was a decade ago, there are just as many who would argue that the challenges have changed.

The physical hardships have gone, but in their place, traders face a fast-growing array of new export goods, and aggressive trading corporations from all corners of China that are as starved as ever of foreign exchange, and see this as the prime opportunity to meet the year's export quotas.

For if there is one thing that certainly has not changed, it is China's urgent need for foreign exchange; as long as this remains—and there are few signs that it will disappear—the Canton Fair is likely to remain the main single event in the country's foreign trading calendar.

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D.D.

A RMB Yuan 5bn investment

David Dodwell

Guangdong Metals and Minerals

We are a major exporter and importer of Building Hardware, Building Materials, Non-Metallic Minerals and Products, and Non-Ferrous Metals and Products.

Over the years, we have, adhering to the principle of equality and mutual benefit, established extensive trade relations with over 80 countries and regions of the world.

We sincerely hope to further develop our business ties with the world. Businessmen are welcome to come to Guangzhou to have talks with us.

We welcome orders for processing as per your drawings or samples. Our products are of top quality and reasonably priced. Prompt delivery is guaranteed.

OUR MAIN PRODUCTS:
Cast Iron Products including Pipes and Fittings, Manhole covers and Frames, Flush Covers and Base Brackets;

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Non-Metallic Minerals including Fluorspar, Graphite, Quartz, Barytes, Feldspar, China Clay, White/Black Clay and Gypsum;

Non-Ferrous Metals and Rare Earth Products including Wolfram Ore and Scheelite, Arsenic Residue, Arsenic Trisulfide, Tin Ingots, Zinc Ingots, Mercury, Tungsten Trisulfide, Ammonium Perchlorate, Tungsten Powder, Manganese Dioxide Powder, Beryll Ore, Columbite, Struoverite, and all kinds of rare earth products.

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We can also manufacture castors to meet your special requirements. Satisfaction guaranteed. Orders are most welcome.

China National Metals and Minerals I/E Corp., Guangdong Branch
774, Dongfang Rd., East, Guangzhou, China
Cable: "MINMETALS" Guangzhou Telex: 44377 WUJIN CN

Introducing Guangdong CMEC

Under the direction of the Ministry of Machinery Industry of the People's Republic of China, China National Machinery & Equipment I/E Corp (CMEC) is an enterprise which integrates production with trade and exports machinery and equipment.

"Since the founding of our Corporation, we take the advantages of integrating production with trade, technology with trade and import with export, and are thus able to turn out more and better products, expand our export markets, and further develop trade relations with industrial and commercial circles throughout the world. Our annual sales volume has been ever-increasing."

Bordering on the South China Sea and next-door to Hong Kong and Macao, and with all her railways, ports and air and other transportation facilities, Guangdong enjoys unique favourable conditions in securing supplies from various sources and communication with our customers.

We uphold the principle of equality and mutual benefit. We sincerely wish to strengthen cooperation and further develop trade relations with industrial and commercial circles all over the world.



China National Machinery & Equipment I/E Corp., Guangdong Branch
Address: 59 Zhanqian Rd., Guangzhou, China
Cable Address: "EQUIPEX" Guangzhou Telex: 44426 EQUIM CN

GUANGDONG 3

WHEN YE XUANPING was appointed governor of Guangdong in October last year, many among students at Peking University about the off-spring of senior cadres winning pivotal jobs in the country.

Ye Xuanping is the son of Ye Jianying, one of the founding fathers of China's Communist revolution, and one of the most prominent elder statesmen still alive in the party.

It took the mayor of Peking, Chen Xitong, to come to the junior's defence: "He has proved himself very competent, and enjoyed high prestige," mayor Chen was reported to have told students: "It is as wrong to say that children of senior cadres should not be promoted even if they are qualified as it is to say they should be promoted if they are not qualified."

"When Ye Xuanping was a chief engineer, I was merely a worker. Now that I am a mayor, why is it surprising that he has become a provincial governor?" From the gossip, one would imagine that Ye Xuanping is a striping of a youngster, following a fast track to high office on his father's coat tails. In fact, Ye is 60-years-old, sports a hearing aid, and has the kind of eyes that say he has spent too many hours working and too few sleeping.

He has spent a large part of his working life in factories in Siberia and north-east China, and may not be a good example of the nepotism that is undeniably at work in China today.

When Ye Xuanping returned to Guangdong in 1980—first to be the province's governor, then to be Mayor of Guangzhou, and finally to become governor late last year—he returned to his home province after an absence of 40 years.

It was a completely changed province from the war-torn region Ye recalls leaving as a 16-year-old boy. The Japanese occupation forces controlled the area, and the struggle between the nationalist forces loyal to Chiang Kai Shek and the Communist forces coming together around Mao Tse Tung was approaching its peak.

Guangzhou was a stronghold for Chiang's forces, and not a comfortable place for the likes



PROFILE: YE XUANPING, GOVERNOR, GUANGDONG

Return by son of province

of Ye Jianying and his family: "Guangzhou was plagued by a deep suffering," Ye Xuanping recalls: "We left for the north because we couldn't find a way out politically or economically. We couldn't see any future there."

Ye junior spent time in Yenan, and with insurgent forces fighting a guerrilla war being fought ahead, instead of the north. After liberation, with China keeping close links with the Soviet Union, he went to Siberia to study machine building in a Soviet factory.

"I learned to make machine tools," Ye recalls. "From such a discipline, I have had to learn to be a governor."

governorship was more comprehensive than that. After transferring to be chief engineer in a large factory in north-east China for a number of years, he was moved to Peking to become director of the Third Bureau of the Science and Technology Commission.

"I am a Communist Party member, and I have gone to work where the party has pointed me," Ye says. "I was told to work in my home province, so I came back."

As Governor of Guangdong, Ye has one of China's toughest—but potentially most satisfying—political portfolios. Being a native of Guangdong, he is better equipped than most to deal with the chauvinist lean-

ings of the Cantonese people. He is also probably less fazed than many by the comparative openness of the province to foreign influences.

He sees Guangdong at the forefront of the open-door policy, and seems to thrive on the challenges involved with being the first province to take "the pounding waves" of foreign influence—first in 1979 the exposure to foreign influence, and then in 1983 to the eruption of corrupt business practices.

"The open policy has brought some negative influence over the society, but when this is overcome, it will inject renewed vigour into our society," he commented recently.

Local people are no longer titivated by being able to watch Hong Kong television programmes, he says, but he jokes about visiting officials from northern China who stay up late at night, wide-eyed over programmes they can never normally see.

While he is confident that Guangdong has built up an irresistible momentum for economic growth, he is concerned about the poverty of knowledge among cadres who are entrusted with orchestrating the province's modernisation policies. He is also concerned about Guangdong's imbalanced development—particularly the failure to provide enough electricity, or an adequate infrastructure, to ensure smooth development.

As a result, investment in power generation and road and rail building remains the priority of the coming five-year plan period. Economic growth is also to be eased to reduce pressures that led to severe overheating of the economy in 1984 and 1985.

Reforms have been moving very fast, and it has been easy to trip over or fall behind. Guangdong inevitably experiences reforms faster, and more strongly," he says.

The mood of confidence is never the less strong. "There is no comparison between the Guangdong of today, and the Guangdong I left in 1940. There has been a change, and now we are thriving."

David Dodwell

PEARL RIVER BRIDGE SUPERIOR SOY



PEARL RIVER BRIDGE



CHINA NATIONAL CEREALS, OILS & FOODSTUFFS IMPORT & EXPORT CORPORATION GUANGDONG FOODSTUFFS BRANCH
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Again the leading exporter



TRADE: Changed policies and considerable foreign investment have put the province in an even stronger trading position.

PERHAPS no Chinese province is more intertwined historically with foreign trade and investment than Guangdong. For centuries, the milky-brown Pearl river that meanders through its verdant counties has been a conduit to the world, channelling the vast array of China's resources into export markets across the world.

For much of this century, however, Guangdong and its capital, Guangzhou (Canton) have been outpaced by the flood of trade and investment emanating from major port cities along China's eastern coastline—like Shanghai, Tianjin and Dalian. The advent in 1979 of China's current programme of economic reforms is gradually reversing that.

"Today, helped by stimulative government policies and considerable foreign investment, Guangdong is again China's leading exporter abroad," says Shanghai's Guangdong province, last year's top two exporters. In the first half of 1986, when the country's total exports were up 13.7 per cent to \$12.8bn, Guangdong's exports rose 46.7 per cent to \$1.5bn, about 14 per cent of the national total.

Provincial officials expect to register an equally strong export performance in the second half, when South China's autumn harvest normally boosts agricultural exports. Agricultural output makes up 45 per cent of Guangdong's total exports.

The province's export trade is gathering momentum only a year after spluttering out on a three-year slump that saw exports decline in nominal as well as real terms from 1981 levels. Exports slackened markedly in the first half of 1985, when Peking allowed Chinese factories to decide for themselves what products they would produce and where they would sell them.

Domestic consumer demand was soaring then, tempting many factories to manufacture consumer goods for the domestic market rather than for export. At the same time, the central government withdrew the subsidies it had been paying to foreign trade corporations that had been exporting goods for foreign exchange at a loss.

Manufacturers had quickly responded by selling into the more profitable home market, where delivery deadlines and quality requirements were less

demanding. To counterbalance those decisions, Guangdong allowed foreign trade corporations fresh autonomy to set prices of goods being sold abroad, instead of locking them in to official price structures. The government also decided to encourage exports by allocating a greater portion of foreign exchange earnings to companies seeking products overseas.

Enterprises now have improved access to the foreign exchange they earn, depending on the types of products they sell and whether the goods are needed domestically. Exports should get another boost in the second half of this year following a 13.5 per cent devaluation of the yuan in July.

Still, Guangdong officials say the most significant long-term factor in the province's improved export trade may be the contribution made by enterprises with foreign involvement: "Their technology and business methods have promoted the province's exports," says Li Liel, sub-director of Guangdong's Economic Commission.

During the first half of 1986, according to the official China News Service, \$249m of exports, or nearly 12 per cent of Guangdong's total exports, came from ventures with foreign involvement.

Guangdong is home to three of China's four special economic zones, two of its 18 open coastal cities, 16 open counties and 140 ports authorised to export overseas. "The economic doors are more open here than in other provinces," says Zhao Yonglin, director of the import and export administration of Guangdong's commission of foreign economic relations and trade.

The province has logged more than 55,000 business agreements with foreigners, who in turn have committed \$8bn to projects in the province, half of the \$16bn that foreigners have committed to the entire country since 1979. So far, \$2.6bn of that has been spent in Guangdong.

The province has succeeded in attracting foreign investment because Peking has allowed it to sign investment contracts and set many of its own economic policies. It also benefits from

trying to swim to "freedom" in Hong Kong, there are today fewer than 1,000 a month.

People in Dongguan were appalled recently with news that five people from the municipality had been arrested in a restaurant in Hong Kong's Wanchai district with not enough money to pay for even a dish of their meal. It was unclear whether they were most offended that someone had tried to flee to Hong Kong, or that they had arrived there with barely a cent between them.

The conclusion was that the group can only have been migrant labourers temporarily working in the city, and it is tempting to believe they were

geographical proximity to Hongkong and Macao, where about four-fifths of foreign investment in China comes from. In Guangdong, that proportion is nearly 80 per cent, officials say.

Much of the investment is in the form of factories and ventures connected with industrial concerns in Hongkong or Macao which are eager to take advantage of cheap labour and materials in China. At the end of 1985, according to Hongkong's Trade Development Council, local companies had started at least 80 joint ventures in Guangdong involving initial investments of \$1m or more.

Because many of the ventures act as satellite plants for manufacturing concerns in Hongkong, the percentage of Guangdong's exports being shipped to Hongkong is increasing. Still, most of Guangdong's exports from the province are fresh food products. In the first six months of 1986, \$12m of exports, or 59 per cent of Guangdong's total exports, went to Hongkong—compared with \$1.8m, or about 54 per cent, for 1985.

The involvement of Hongkong and Macao businessmen has been a boon to the province's light industries, officials say. In 1985, the value of light industry output was up 25.6 per cent to 30.5bn yuan, out of total industrial output of about 44.1bn yuan.

Guangdong now is the leading producer in China of electric fans, shoes, luggage and handbags, and plastics, according to officials in Guangzhou.

While light industry accounts for nearly 70 per cent of Guangdong's output, the province's major investment arm, Guangdong International Trust and Investment Corporation (Gitic), has finalised a number of major deals recently, according to its president, Xu Fenz.

Among them, Gitic and Fujii Photo Film Company of Japan have agreed to build a Yen 300m photographic goods plant in the Shantou special economic zone, while Gitic also has signed agreements to build a float glass factory and new cement plants. Officials say they also want to promote high-technology industries, but so far their efforts have met with little success.

One reason is that foreign investors have focused on



Channels for trade

CONTINUED FROM PAGE 1

is better used for sugar than for rice.

In addition, Guangdong remains China's leading producer of light industrial goods, worth RMB Yuan 38.5bn last year, or about a quarter of China's total output. It was China's foremost supplier of electric fans, shoes, handbags and plastic products. Such products accounted for over 80 per cent of Guangdong's industrial output last year.

For the doubters in Peking, the clearest evidence of success in Guangdong ought to be the virtual disappearance of flight to Hong Kong. From a point in the mid 1970s when more than 1,000 Chinese a day were

Company Notices

NOTICE OF NINTH PARTIAL REDEMPTION

THE KINGDOM OF DENMARK

Issue of US\$ 250,000,000 12 1/2% Notes due February 27, 1992 with 250,000 Warrants to subscribe 12 1/2% Notes due February 27, 1992

Pursuant to paragraph "Redemption and Purchase" of the Terms and Conditions of the Notes, notice is hereby given that as a result of exercise of Warrants, Notes for an additional aggregate principal amount of US\$ 7,000,000 will be redeemable on October 23, 1986 at 101 per cent of their principal amount, together with accrued interest (Leu US\$ 417.92 per denomination of US\$ 5,000) from February 27, 1986 to the date of redemption.

The Notes bearing the following serial numbers have been drawn by lot in the presence of a Notary Public and may be presented to Kredietbank S.A. Luxembourg, 43, Boulevard Royal, Luxembourg or to the other Paying Agents named on the Notice:

Table of serial numbers for the redemption of US\$ 7,000,000 worth of notes.

Notes surrendered for redemption must have coupon due February 27, 1987 and subsequent attached. Interest will be accrued on the above serial numbers from October 23, 1986. Amount remaining outstanding: US\$ 26,000,000

Luxembourg, September 22, 1986

THE FISCAL AGENT KREDIETBANK S.A. LUXEMBOURGEOISE

UNOCAL

U.S. \$200,000,000 Union Oil Company of California

Guaranteed Floating Rate Notes due 1996

Guaranteed by Unocal Corporation

In accordance with the provisions of the Notes, notice is hereby given that the Rate of Interest for the six-month period ending on 19th March 1987 has been fixed at 8 1/8% per annum.

For holders of fully registered Notes the Rate of Interest for the six-month period ending on 19th March 1987 has been fixed at 8 1/8% per annum.

Union Bank of Switzerland

London Branch Agent Bank 22nd September 1986

GENERAL MOTORS CORPORATION

Further to the DIVIDEND DECLARATION of 29th August, 1986 NOTICE is now given that the following distribution will become payable on and after 15th September, 1986, against presentation to the Depository (as below) of Claim Forms listing Bearer Depository Receipts.

Table showing dividend distribution rates: GROSS DISTRIBUTION LESS 15% US WITHHOLDING TAX, 6.25 CENTS, 0.9375 CENTS, 5.3125 CENTS PER UNIT.

Barclays Bank PLC. Stock Exchange Services Department 54 Lombard Street, London EC3P 3AH

NOTICE TO HOLDERS OF EUROPEAN DEPOSITARY RECEIPTS (EDRs) AJINOMOTO CO., INC.

NOTICE IS HEREBY GIVEN that a cash dividend will be paid to holders of record date September 30, 1986. The dividend will be paid in cash and the amount will be credited to the account of the holder of the EDRs.

NOTICE TO HOLDERS OF EUROPEAN DEPOSITARY RECEIPTS (EDRs) NIPPON SHINPAN CO., LTD.

NOTICE IS HEREBY GIVEN that a cash dividend will be paid to holders of record date September 30, 1986. The dividend will be paid in cash and the amount will be credited to the account of the holder of the EDRs.

NOTICE TO HOLDERS OF EUROPEAN DEPOSITARY RECEIPTS (EDRs) CREDIT FONCIER DE FRANCE

NOTICE IS HEREBY GIVEN that a cash dividend will be paid to holders of record date September 30, 1986. The dividend will be paid in cash and the amount will be credited to the account of the holder of the EDRs.

READY MIXED CONCRETE LIMITED RMC GROUP PLC

7 1/2% Bonds due 1987 FF 80,000,000

Notice is hereby given that, in accordance with the terms and conditions of the above-mentioned loan, Bonds for the principal amount of FF 8,816,000 have been drawn in the presence of a Notary Public, on September 8, 1986 for redemption at par on October 25, 1986.

The following Bonds have been drawn and may be presented to Kredietbank S.A. Luxembourg or to other Paying Agents named on the Notice:

Table of serial numbers for the redemption of FF 8,816,000 worth of bonds.

Bonds surrendered for redemption should have attached the coupon due on October 25, 1987. Coupons due on October 25, 1986 should be detached and collected in the usual manner. Amount outstanding: FF 13,600,000

Luxembourg, September 22, 1986

KREDIETBANK S.A. LUXEMBOURGEOISE

Contracts and Tenders

INVITATION FOR BIDS

The Provisional Military Government of Somalia (PMG), Ethiopian Road Transport Authority (ETA) has invited tenders from the International Development Association (IDA) and it is intended that part of the proceeds of the tender will be used for the purchase of spare parts for the supply of Road Traffic Safety and Training Equipment and spare parts.

The IDA now invites sealed bids from eligible bidders for the supply of Equipment and Spare Parts.

Interested bidders from member countries of the World Bank (IDA), Switzerland, Taiwan, and China may obtain further information from the IDA Procurement Office Room 400 of the Headquarters Building, Washington D.C. 20547.

The Authority reserves the right to reject any or all bids.

Ethiopian Road Transport Authority P.O. Box 2594 Addis Ababa Ethiopia

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ALGERIA NATIONAL COMPANY FOR THE SUPPLY OF FOOD PRODUCTS (ENAPAL)

Invitation to Tender No. 21/86

The National Company for the Supply of Food Products "ENAPAL" is launching an international invitation to tender for the supply of 2,000 tonnes of coffee type "vert robusta" (green robusta), with the usual conditions applicable, as set out in the specifications.

Offers must be sent in a double sealed envelope to: ENAPAL, 29 Rue Larbi Ben M'Elidj, Algiers, Algeria.

The closing date for receipt of tenders is fixed at four (04) days from the date on which this notice is published.

Tenders shall be bound by their offers for a period of fifteen (15) days from the closing date.

Clubs

EVER has outlined the other benefits of a policy of life and health cover. Money, security, peace of mind, and a wide range of investment opportunities. For further details write to: EVER, 15, Great St. Hill, 01-724 6377.

CLASSIFIED ADVERTISEMENT RATES

Table of classified advertisement rates for various categories like Commercial & Industrial, Residential Property, etc.

APPOINTMENTS Regional appointments at Ernst & Whinney

Eight partners have been admitted to the UK practice by ERNST & WHINNEY. All have been appointed to regional offices: Mr Cedric M. Clapp (Bristol, UK); Mr Alan Clarke (Manchester, UK); Mr Richard Collins (Leicester, UK); Mr John F. Hobbs (Norwich, UK); Mr P. Colin Lamb (Glasgow/Edinburgh, UK); Mr C. Angus Macaulay (Liverpool, UK); Mr W. Scott Martin (Manchester, UK); Mr W. J. M. Williams (Newcastle, UK).

Mr Paul A. Cox has been appointed a director of COPE ALBANY INTERNATIONAL, the general manager of Bulk Fruit Services, a subsidiary.

Mr David Glasser has been appointed marketing and development director of ZODIAC TOYS. He was with Halfords, another audit and corporate advisory services).

Mr Tony Ashby has been appointed chairman and chief executive of the aviation and aerospace division of ALEXANDER STENOHOUSE. The division formed last month provides London marketing services for the US and Canadian retail operations of Alexander & Alexander Inc and Reed Benham as well as for international space and satellite clients.

Mr Maurice Estaff has been appointed to the board of UNIGATE. He joined in 1950 and was appointed managing director of Unigate Dairies in October 1983.

Mr Simon N. L. Chaffin and Mr Richard Templeton have joined the board of THE WEST OF ENGLAND TRUST as executive directors.

Mr C van Rijn has been elected chairman of the board of RJA Smith, a former senior partner of Jones Lang Wootton has been appointed a director of BASLE-MEKE ESTATES.

MANN & CO, a subsidiary of Hambro & Co, has appointed Mr Brian Coupe as regional director (south). He was an area director.

Miss Vivienne Carlton has joined the board of LEADENHALL ASSOCIATES, she also becomes the firm's compliance officer for all dealings with the Stock Exchange.

Mr David A. C. Douglas-Home has been appointed a director of WORGAN GRENFEEL (SCOTLAND). He joined Morgan Grenfell & Co in 1986 and was appointed a director of the engine division.

AUTOCAR ELECTRONIC EQUIPMENT has appointed Michael Shearing as chief executive of the engine division.

Notice of Prepayment THE TOYO TRUST AND BANKING COMPANY LIMITED (Incorporated with limited liability in Japan) U.S. \$10,000,000 Redeemable Negotiable Floating Rate Dollar Certificate of Deposit No. 000001 to 000015 Issued on 7th October, 1982, Maturity 9th October, 1987, Callable on 9th October, 1986

Notice is hereby given in accordance with the conditions of the above Certificates of Deposit (the "Certificates") as printed on the reverse of the Certificates that The Toyo Trust and Banking Company, Limited (the "Bank") will prepay all the outstanding Certificates on 9th October, 1986, (the "Redemption Date") at their principal amount.

Payment of the principal amount together with accrued interest to the Redemption Date, will be made on the Redemption Date against presentation and surrender of the Certificates at the London Branch of the Bank.

Interest will cease to accrue on the Certificates on the Redemption Date.

Financial Times Conferences

THE FT CITY FINANCIAL SERIES London - October 23 and 24, 1986

The Financial Times Conferences Organisation is arranging four special seminars to coincide with the questions and Financial Services and Technology '86 exhibition at the Barbican.

EUROPEAN BUSINESS FORUM - ITALY AND THE INTERNATIONAL ECONOMY Rome - November 10 and 11, 1986

Possibly the most distinguished panel of speakers the FT has ever assembled comes together in Rome on November 10 and 11 to participate in this important forum.

WORLD BANKING London - December 9, 10 and 11, 1986

This year's conference in this long-running and successful series has an investment banking day chaired and opened by Mr Stanislas Yankovich and a commercial banking day with Mr John Smith, MP, Opposition.

Minister House, Arthur Street London EC4R 9AX

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AUTHORISED UNIT TRUSTS

FT UNIT TRUST INFORMATION SERVICE

EQUITIES

Table of equity prices with columns for Name, Price, Change, and % Change. Includes entries like British Airways, British Petroleum, and British Telecom.

FIXED INTEREST STOCKS

Table of fixed interest stocks with columns for Name, Price, Change, and % Change. Includes entries like British Telecom, British Petroleum, and British Airways.

'RIGHTS' OFFERS

Table of rights offers with columns for Name, Price, Change, and % Change. Includes entries like British Telecom, British Petroleum, and British Airways.

Disclaimer text regarding the accuracy of the data and the responsibility of the publisher.

HOLIDAY AND TRAVEL ADVERTISING

Advertisement for holiday and travel advertising, mentioning Wednesday and Saturday rates.

FINANCIAL TIMES SURVEYS '85 PROGRAMME

Advertisement for the Financial Times Surveys '85 Programme, detailing the survey methodology.

FT CROSSWORD PUZZLE No. 6,131

Crossword puzzle grid with clues for Across and Down.

Clues for the crossword puzzle, including '1 and 13 Like the clear leader in road race?' and '14 Very pleasant choice?'.

Main table of FT Unit Trust Information Service, listing various unit trusts, their managers, and performance data.

Continuation of the FT Unit Trust Information Service table, listing additional unit trusts and their details.

AUTHORISED UNIT TRUSTS & INSURANCES

Main table listing various financial products, companies, and their details. The table is organized into columns with headers for different categories of trusts and insurance companies. Each entry includes a company name, a list of products, and associated numerical data.

INSURANCES

Sub-table under 'INSURANCES' listing various insurance policies and their details, including company names and product descriptions.

Handwritten signature or note at the bottom center of the page.

INSURANCE, OVERSEAS & MONEY FUNDS

Table listing various insurance and investment products with columns for company name, fund name, and numerical values.

Table listing insurance and investment products, including 'For East Growth Fund' and 'First Growth Fund'.

Table listing insurance and investment products, including 'Newcomer Admin. (Germany)' and 'Mitsubishi Gln Res. Serv. Fd. Inc.'.

Table listing insurance and investment products, including 'Schroder Mgt. Services (Austria) Ltd' and 'Warburg Investment Management Jersey Ltd'.

Table listing insurance and investment products, including 'UK President' and 'UK House, Cash & Savings'.

Table listing insurance and investment products, including 'First Growth Fund' and 'First Growth Fund'.

Table listing insurance and investment products, including 'Newcomer Admin. (Germany)' and 'Mitsubishi Gln Res. Serv. Fd. Inc.'.

Table listing insurance and investment products, including 'Schroder Mgt. Services (Austria) Ltd' and 'Warburg Investment Management Jersey Ltd'.

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MANAGEMENT SERVICES

OFFSHORE AND OVERSEAS

Money Market Trust Funds

Bank Accounts

TRADITIONAL OPTIONS

3-month call rates

Table listing traditional options and 3-month call rates with columns for option name and numerical values.

A selection of Options traded in the London Stock Exchange Report Page.

BRITISH FUNDS - Table with columns for Fund Name, Stock, Price, Last, Yield, and Div. Includes sections for 'Shorts (Lives up to Five Years)', 'Five to Fifteen Years', and 'Over Fifteen Years'.

AMERICANS - Cont. - Table listing various American stocks with columns for Stock, Price, Last, Yield, and Div. Includes sub-sections for 'CANADIANS', 'BANKS, SP & LEASING', 'CORPORATION LOANS', 'COMMONWEALTH & AFRICAN LOANS', 'LOANS', 'Public Board and Int.', 'FOREIGN BONDS & RAILS', and 'AMERICANS'.

LONDON SHARE SERVICE

Table containing 'BUILDING, TIMBER, ROADS - Cont.', 'DRAPERY & STORES - Cont.', 'ELECTRICS', 'CHEMICALS, PLASTICS', 'GRAPERY AND STORES', and 'BEERS, WINES & SPIRITS'. Each section lists multiple companies with their respective stock prices, last trading prices, yields, and dividends.

Table containing 'ENGINEERING - Continued', 'INDUSTRIALS - Continued', 'HOTELS AND CATERERS', and 'INDUSTRIALS (Misc.)'. Each section lists various industrial and engineering companies with their stock prices, last trading prices, yields, and dividends.

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INDUSTRIALS - Continued. Table listing various industrial companies with columns for Stock, Price, and % Change.

LEISURE - Continued. Table listing leisure-related companies with columns for Stock, Price, and % Change.

PROPERTY - Continued. Table listing property-related companies with columns for Stock, Price, and % Change.

INVESTMENT TRUSTS - Cont. Table listing investment trusts with columns for Stock, Price, and % Change.

FINANCE, LAND - Cont. Table listing finance and land-related companies with columns for Stock, Price, and % Change.

MINES - Continued. Table listing mining companies with columns for Stock, Price, and % Change.

Notes, Regional & Irish Stocks, and other financial information at the bottom of the page.

RENOWN INCORPORATED

On the 17th September, 1986 the Board of Directors of Renown Incorporated met and approved the following Report: **SEMI-ANNUAL BUSINESS RESULTS** (unaudited and on consolidated basis)

For the six months ended 30th June,	
1986	1985
Millions of Yen	
Net Sales	110,836
Gross profit	39,749
Selling general and administrative expenses	35,899
Operating income	4,050
Non-operating income:	
Interest Income	2,262
Other income	1,553
	3,815
Non-operating expenses:	
Interest expense	831
Interest on bonds and notes	442
Other expenses	821
	1,654
Income before income taxes	5,971
Income taxes	2,991
Equity in earnings of associated companies	598
Net income	3,578
Yen	
Earnings per share	22.92

Note: No interim dividend is declared and paid for the current semi-annual period because the company does not apply the interim dividend system to shareholders of the company.
22nd September, 1986

CONSTRUCTION CONTRACTS

McAlpine builds roof over nuclear pond

SIR ROBERT MCALPINE & SONS has been awarded a \$3.2m contract by British Nuclear Fuels to erect a covered structure over an existing storage pond at Sellafield. The 35 metre high roof, covering an area of 100 metres x 42 metres, will be supported on carbon steel columns with stainless steel roof trusses. The walls and roof will be lined with stainless steel to provide a maintenance-free surface over the pond. The 42 metre stainless steel roof trusses will have the longest span so far installed in the UK. Work, due for completion in April 1987, includes landscaping.

Scunthorpe hospital scheme

CLUGSTON CONSTRUCTION has successfully tendered for several building contracts culminating in orders totalling \$8.5m. Largest is a £2.7m accident and emergency department which forms Phase B of the Scunthorpe District General Hospital development for the Yorkshire Regional Health Authority. A joint venture tender by a consortium of Clugston and Young Austin & Young has produced a £2m order from the West Midlands Regional Health Authority for a psychiatric unit and temporary maternity unit at Burton District General Hospital. Further building contracts include Phase 1 of a school at Skegness for Lincolnshire County Council — value £1.3m and factory units at Cusborough for English Estates.

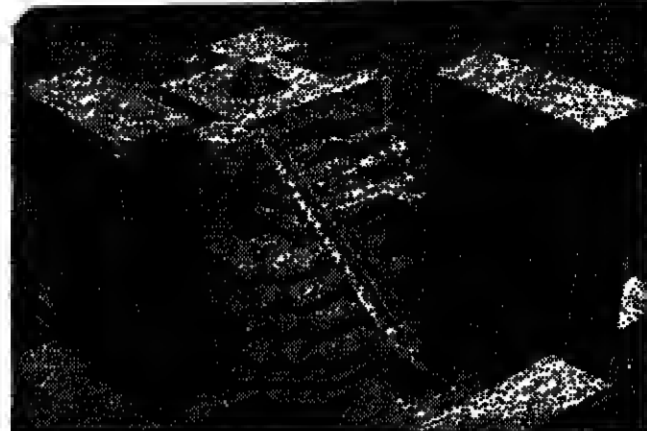
Renovating US school building

TAYLOR WOODROW CONSTRUCTION CORPORATION, New York, has been awarded a contract worth \$7.2m (\$4.8m) by the Town of Carlisle, Massachusetts, for work on its teaching facility. The contract comprises building extensions and renovations. Work has started for completion by December 1987.

Wates, City of London Properties, and Wimpey Property Holdings, are planning to build a £150m eight-storey glass pyramid over London Wall in the City covering the area from Moorgate Tube Station to the Guildhall.

£150m glass pyramid in City

BY JOAN GRAY CONSTRUCTION CORRESPONDENT



Architect's model of proposed City Plaza glass pyramid at London Wall.

The pyramid—which will offer 500,000 sq ft of office space on a four-acre site—was conceived after the City's planners, searching for large spaces to offer financial institutions for trading floors in the wake of the Big Bang, spotted the empty acres of London Wall and decided they were ripe for building over.

London Wall, by the Barbican, is a post-war planners' dream that has faded high-level pedestrian walkways above a four-lane urban motorway between rows of obsolete slab-sided office blocks surrounded by empty concrete spaces dotted with small, jazziy geometrical shops.

But the fading dream is about to become what Mr Rodney Clutton, Wates City development director, describes as the "community area" of the city.

Though the office blocks need modernising for electronic technology and many of the jazzy shops are peeling and empty, the windswept concrete spaces in between offer some of the city's largest building sites in the City.

Wates and Wimpey plan to build their pyramid—to be called City Plaza—on the empty

concrete podium between two London Wall office blocks they already own—Wates 21-storey City Tower and its Wimpey-owned sister St Alphege House.

The site will be completed by bridging the London Wall motorway and by demolishing a seven-storey 1960s telephones exchange, owned by the Post Office and Postel, which are supporting the scheme. The new building will have eight office floors stepped back to give what the architects Winney Mackay-Lewis describe as "the effect of an Aztec pyramid," with a bank of lifts concealed in glass tubes running up the outside at an angle of 45 degrees.

The two largest floors will provide 60,000 sq ft of unbroken office space each, suitable for dealing rooms; the building will then taper to a top floor of 16,000 sq ft.

Consultants Ove Arup have solved this problem by adapting a civil engineering method more usually employed in large bridges. The London Wall motorway will be crossed by a network of latticed steel beams six metres high and 29 metres long, carrying the weight of the pyramid above at a load of 800 tons per beam. Pedestrians will be able to walk through these huge beam spaces, and to wander between them into a network of small shops.

Monk, build to last
A Monk & Company p.l.c. B3, Box 4, Watlington, Oxfordshire OX1 2JN, 0845 834000

Hotel to be built at Maidstone

With the award of a £8.7m contract for a 120-bed hotel and country club at Maidstone, Kent, NEWGATE METAL ROOFING SYSTEMS has won the contract to supply and fit roofing for London City Airport STOLport now rising from the site of the old Royal Dock, with a tender of more than £500,000. The work includes the terminal building, the atrium pier, remote plant room, the fire rescue and maintenance building.

NEWGATE METAL ROOFING SYSTEMS has won the contract to supply and fit roofing for London City Airport STOLport now rising from the site of the old Royal Dock, with a tender of more than £500,000. The work includes the terminal building, the atrium pier, remote plant room, the fire rescue and maintenance building.

This announcement appears as a matter of record only.

\$500,000,000



BANCO CENTRAL
North American Capital Corporation

a wholly owned subsidiary of Banco Central, S.A., Madrid

Commercial Paper Program

The undersigned acted as advisor in the establishment of this program and has been appointed as a dealer.

The First Boston Corporation

September 18, 1986

BALFOUR BEATTY CONSTRUCTION has been awarded a £790,000 contract by Norsk Hydro Fertilisers for construction of a turbo alternator building at Immingham Dock.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

- Current: Int Broadcasting Convention and Exhibition (01-240 1871) (until September 25), Met Exha Hall, Brighton
- September 21-23: Int Garden and Leisure Exhibition—GLEE (01-430 2211), NEC, Birmingham
- September 23-25: Seniorsconductor International Exhibition (01-591 5051), NEC, Birmingham
- September 28-30: British Footwear Fair (01-739 2071), Olympia
- October 1-3: The Showman's Show (01-908 22194), Cranfield Space Centre
- October 5-9: Building '86 (01-498 1261), Earls Court

OVERSEAS TRADE FAIRS

- Current: International Engineering Fair (021-458 9600) (until September 24), Bonn
- September 23-25: International Rail, Road, Sea and Air Transportation Exhibition (01-908 4667), Garmisch
- September 30-October 4: International Machine Tool Trade Fair—INTEERTOOL (01-877 4551), Vienna
- October 6-12: International Wine and Spirits Show (0494 775454), Montreal
- October 18-21: International Office Trade Fair—ORGATECHNIK (01-936 7251), Cologne

BUSINESS AND MANAGEMENT CONFERENCES

- September 22-23: Pharmaceutical Society, British Pharmaceutical conference (01-735 9141), Jersey
- September 24-25: Fibex: "Acquisition Monthly" conference on how to buy and sell companies (01-821 5555), Chesham Hotel, W1
- September 24-25: Euromoney two-day seminar: (1) Options—a risky business? (2) Hedging can be fun (01-236 3288), Grosvenor House Hotel, W1
- September 25-26: FT Conference: Pacific Basin oil and gas—prices, investment and the business outlook (01-621 1855), Grosvenor House Hotel, W1
- September 30-October 2: Royal Institute of Navigation: Worldwide Navigation into the 21st Century (01-586 5021), Brighton Metropole
- October 2-4: International Association of Energy Economists: Energy Conference (Norway 47-5 05 25 50 40), Bergen

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the week. The board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends concerned are interim or final. The sub-divisions shown below are based mainly on last year's timetable.

WEDNESDAY SEPTEMBER 24
COMPANY MEETINGS:
 BT's (Group) Plc, Birmingham, 10.30
 Balfour Beatty Plc, London, 12.00
 British Nuclear Fuels Plc, London, 12.30
 British Telecom Plc, London, 12.30
 British Airways Plc, London, 12.30
 British Petroleum Plc, London, 12.30
 British Overseas Airways Corp, London, 12.30
 British Telecommunications Plc, London, 12.30
 British Telecommunications Plc, London, 12.30
 British Telecommunications Plc, London, 12.30
BOARD MEETINGS:
 American Electronic Components, Detroit
 Anglo-Thai (India), London
 Anglo-Thai (India), London
 Anglo-Thai (India), London
INTEREST PAYMENTS:
 Anglo-Thai (India), London
COMPANY MEETINGS:
 Anglo-Thai (India), London
BOARD MEETINGS:
 Anglo-Thai (India), London
INTEREST PAYMENTS:
 Anglo-Thai (India), London

Thomas De La Rue
Bearer Securities

New Address
from Monday, September 29
6-8 Fenchurch Buildings
London EC3M 5HR

Telephone: 01-480 7130
Telex: 9413136
Facsimile: 01-481 4363

This advertisement complies with the requirements of the Council of the Stock Exchange

Kingdom of Sweden
U.S. \$250,000,000
7 per cent. Bonds due 1991
Issue Price 100½ per cent.

The following have agreed to subscribe or procure subscribers for the above Bonds:

Swiss Bank Corporation International Limited

Bank Brussels Lambert NV
 Bankers Trust International Limited
 Banque Paribas Capital Markets Limited
 Credit Suisse First Boston Limited
 Enkredit Securities
 HSJ International Limited
 Morgan Guaranty Ltd
 Nomura International Limited
 PNC Bank
 Shearson Lehman Brothers International
 Union Bank of Switzerland (Securities) Limited

Bank of Tokyo International Limited
 Banque Nationale de Paris
 Citicorp Investment Bank Limited
 Deutsche Bank Capital Markets Limited
 Goldman Sachs International Corp.
 Morgan Grenfell & Co. Limited
 Morgan Stanley International
 Orfion Royal Bank Limited
 Solomon Brothers International Limited
 Svenska Handelsbanken Group
 S.G. Warburg Securities

Application has been made for the 7 per cent. Bonds due 1991 to be admitted to the Official List by the Council of the Stock Exchange, subject only to the issue of the temporary Global Bond.

Interest is payable annually in arrears on 7th October, the first payment being made on 7th October, 1987.

Full particulars of the Bonds are available in the Ebel Statistical Service and may be obtained during usual business hours (Saturday excepted) up to and including 24th September, 1986 from the Company Announcement Office of the Stock Exchange and up to and including 3rd October, 1986 from:

Swiss Bank Corporation International Limited, Hansa Court Limited,
 Three Keys House, 130 Wood Street, London EC2Y 8AQ. New House,
 25 St James's Place, London WC1N 7PB. Bankers Trust Company,
 68 Old Broad Street,
 London EC2M 2EE.

22nd September, 1986

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WORLD STOCK MARKETS

AUSTRIA

Table of Austrian stock market data including company names like Austria Energie, Austria Telekom, and Austria Post, with columns for price and change.

AUSTRALIA

Table of Australian stock market data including company names like BHP, Anglo Coal, and Anglo Petroleum, with columns for price and change.

DENMARK

Table of Danish stock market data including company names like Danmarks Bank, Danmarks Industri, and Danmarks Energi, with columns for price and change.

JAPAN

Table of Japanese stock market data including company names like Daiichi Kangyo Bank, Daiwa Kangyo Bank, and Industrial Bank of Japan, with columns for price and change.

CANADA

Table of Canadian stock market data including company names like Alcan, Inco, and Noranda, with columns for price and change.

TORONTO

Table of Toronto stock market data including company names like Alcan, Inco, and Noranda, with columns for price and change.

MONTREAL

Table of Montreal stock market data including company names like Alcan, Inco, and Noranda, with columns for price and change.

FRANCE

Table of French stock market data including company names like Air France, Bouygues, and Bouygues Telecom, with columns for price and change.

GERMANY

Table of German stock market data including company names like Volkswagen, Daimler-Benz, and Siemens, with columns for price and change.

NETHERLAND

Table of Dutch stock market data including company names like ABN-AMRO, Philips, and Shell, with columns for price and change.

HONG KONG

Table of Hong Kong stock market data including company names like HSBC, Citibank, and Chartered Bank, with columns for price and change.

SINGAPORE

Table of Singapore stock market data including company names like Citibank, HSBC, and Chartered Bank, with columns for price and change.

SPAIN

Table of Spanish stock market data including company names like Banco de España, Banco de Vizcaya, and Banco de Santander, with columns for price and change.

SWEDEN

Table of Swedish stock market data including company names like Volvo, Saab, and Scania, with columns for price and change.

SWITZERLAND

Table of Swiss stock market data including company names like Nestlé, Roche, and Novartis, with columns for price and change.

ITALY

Table of Italian stock market data including company names like Fiat, Eni, and IRI, with columns for price and change.

SOUTH AFRICA

Table of South African stock market data including company names like Anglo American, De Beers, and Anglo Coal, with columns for price and change.

NEW YORK

Table of New York stock market data including company names like IBM, Microsoft, and Apple, with columns for price and change.

INDICES

Table of various stock indices including Dow Jones, Nikkei, and FTSE, with columns for value and change.

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OVER-THE-COUNTER

Large table of over-the-counter stock market data including company names like PNC, Priceline, and Priceline.com, with columns for price and change.

Advertisement for Special Subscription Hand Delivery Service of the Financial Times in Oslo & Stavanger, featuring a map of Scandinavia and contact information.

Closing prices, September 18

NEW YORK STOCK EXCHANGE CLOSING PRICES

Main table containing stock prices for various companies, organized in columns with headers for stock name, price, and change.

Continued on Page 37

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NYSE COMPOSITE CLOSING PRICES

AMEX COMPOSITE CLOSING PRICES

September 19

Table of NYSE Composite Closing Prices, including columns for stock symbols, prices, and volume. Includes sub-sections like 'Continued from Page 36' and 'Over-the-Counter'.

Table of AMEX Composite Closing Prices, including columns for stock symbols, prices, and volume.

OVER-THE-COUNTER Nasdaq national market, closing prices, September 19

Table of Over-the-Counter (Nasdaq) national market closing prices, including columns for stock symbols, prices, and volume.

Advertisement for 'Get your News early in Stuttgart' featuring a newspaper illustration and contact information for The Financial Times (Europe) Ltd.

Continued on Page 35

CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGE

D-Mark hits dollar and pound

BY COLIN MILLHAM

THE DOLLAR and sterling came under pressure last week, but officials in Washington and London probably took entirely different views of the situation.

£ IN NEW YORK

Table with columns: Spot, 1 month, 3 months, Forward premium and discounts apply to the US dollar.

On Thursday the dollar fell below DM 2.00 for the first time since January 1981, but remained above ¥150, probably leaving some room for the spot of pressure on the D-Mark.

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The reason for the dollar's continued decline was the West German and Japanese attitudes towards lower interest rates, and a disappointing unchanged revision of 0.6 per cent growth in second quarter US gross national product, and the comment by Mr James Baker, US

Treasury Secretary, that the dollar must fall further to reduce the US trade deficit unless measures were taken to promote growth abroad.

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LIFFE LONG GILT FUTURES OPTIONS

Table with columns: Strike, Dec, Mar, Jun, Sept, Dec, Mar, Jun, Sept. Includes estimated volume and previous day's open interest.

LIFFE US TREASURY BOND FUTURES OPTIONS

Table with columns: Strike, Dec, Mar, Jun, Sept, Dec, Mar, Jun, Sept. Includes estimated volume and previous day's open interest.

LIFFE £/S OPTIONS

Table with columns: Strike, Oct, Nov, Dec, Mar, Jun, Sept, Dec, Mar, Jun, Sept. Includes estimated volume and previous day's open interest.

LONDON SE £/S OPTIONS

Table with columns: Strike, Oct, Nov, Dec, Mar, Jun, Sept, Dec, Mar, Jun, Sept. Includes estimated volume and previous day's open interest.

PHILADELPHIA £/S OPTIONS

Table with columns: Strike, Oct, Nov, Dec, Mar, Jun, Sept, Dec, Mar, Jun, Sept. Includes estimated volume and previous day's open interest.

LIFFE EURO-DOLLAR OPTIONS

Table with columns: Strike, Oct, Nov, Dec, Mar, Jun, Sept, Dec, Mar, Jun, Sept. Includes estimated volume and previous day's open interest.

LONDON

Table with columns: 3-MONTH NATIONAL GILT, 6-MONTH NATIONAL GILT, 9-MONTH NATIONAL GILT, 12-MONTH NATIONAL GILT. Includes estimated volume and previous day's open interest.

FT-SE 100 INDEX

Table with columns: High, Low, Prev, Close. Includes estimated volume and previous day's open interest.

US TREASURY BONDS (CBT)

Table with columns: High, Low, Prev, Close. Includes estimated volume and previous day's open interest.

CHICAGO

Table with columns: High, Low, Prev, Close. Includes estimated volume and previous day's open interest.

CURRENCY FUTURES

Table with columns: High, Low, Prev, Close. Includes estimated volume and previous day's open interest.

CURRENCY MOVEMENTS

Table with columns: Bank of England, Morgan Guaranty, Change. Lists movements for Sterling, U.S. Dollar, Canadian Dollar, etc.

OTHER CURRENCIES

Table with columns: Country, Spot, 1 month, 3 months, 12 months. Lists rates for Argentina, Australia, Brazil, etc.

CURRENCY RATES

Table with columns: Bank, Special, Spot, 1 month, 3 months, 12 months. Lists rates for US, UK, Canada, etc.

POUND SPOT-FORWARD AGAINST POUND

Table with columns: Day's quoted, Close, One month, Three months, Six months. Lists rates for US, Canada, etc.

DOLLAR SPOT-FORWARD AGAINST DOLLAR

Table with columns: Day's quoted, Close, One month, Three months, Six months. Lists rates for UK, Canada, etc.

EURO-CURRENCY INTEREST RATES

Table with columns: Term, Rate. Lists rates for Sterling, U.S. Dollar, etc.

EXCHANGE CROSS RATES

Table with columns: Sep 19, £, \$, DM, YEN, FF, etc. Lists cross rates for various currencies.

FORWARD RATES AGAINST STERLING

Table with columns: Dollar, D-Mark, French Franc, Swiss Franc, Japanese Yen. Lists forward rates.

EMS EUROPEAN CURRENCY UNIT RATES

Table with columns: Country, Currency, % change. Lists EMS unit rates.

MONEY MARKETS

STERLING'S FALL to a record low last week, according to the Bank of England's exchange rate index, seems much less likely to result in higher UK bank base rates than when the previous record was touched early last year.

NEW YORK RATES

Midland Bank helped restore calm on Friday morning and a large supplier of funds prevented too sharp a rise in interbank rates. At the same time the Bank of England took out virtually all the underlying credit shortage by buying bills at unchanged rates, in an early round of money market intervention, reinforcing the present yield structure.

BANK acts to calm nerves

STERLING'S FALL to a record low last week, according to the Bank of England's exchange rate index, seems much less likely to result in higher UK bank base rates than when the previous record was touched early last year.

BANK OF ENGLAND TREASURY BILL TENDER

Table with columns: Bills on offer, Total applications, Average yield, etc. Lists details of the Treasury bill tender.

WEEKLY CHANGE IN WORLD INTEREST RATES

Table with columns: Location, Rate, Change. Lists weekly changes in interest rates for London, Tokyo, etc.

FT LONDON INTERBANK FIXING

Table with columns: Bid, Offer. Lists interbank fixing rates for various terms.

MONEY RATES

Table with columns: Location, Rate, Change. Lists money rates for Frankfurt, Paris, Zurich, etc.

LONDON MONEY RATES

Table with columns: Term, Rate. Lists London money rates for various terms.

GRANVILLE advertisement listing various companies and their financial performance.

WestLB advertisement for Eurobonds, DM Bonds, and other financial services.

EUROPEAN COAL AND STEEL COMMUNITY advertisement for 13 1/2% BONDS 1988.

Crédit National advertisement for U.S. \$50,000,000 9 per cent Guaranteed Bonds Due 1991.

FINANCIAL TIMES SURVEY

Computer Software and Services

The current slowdown in the multi-million dollar computer software industry is only temporary, according to analysts. They point out that it still remains one of the healthiest and most vibrant of today's business sectors.

A market in transition

THE ICONOCLASTS of the computing services business have had a year of field days as one accepted "belief" after another has proved false.

● The growth of the packaged software business, hitherto seen as the "saviour" of markets shivered and flattened out. North American software executives at the fifth world computing services industry congress last year were describing the changes as "the industry slow down."

● For the first time, a European software house, the French company CAP-Genini-Soged, showed it could hold its own in the US with the big US services companies.

● The Japanese software industry gathered momentum, giving the lie to the idea that the Japanese as a race are not up to writing high quality software. They have been hampered by lack of computer terminals able to handle Japanese characters and by experience in international software development methods but they are recovering from both these hindrances with remarkable speed.

● The notion that customers had an infinite capacity to absorb microcomputer software products has been demolished. Curt Monash of the New York stockbroker Paine Webber set the scene in opening last year's EnnisWebber/Adaptive software and services conference in the US.

By ALAN CANE

of 1985: slowing growth rates, earnings disappointments and even company bankruptcies, but still one of the healthiest and most vibrant businesses around."

What makes the computing services business both so complex and so interesting is the variety of kinds of activity it encompasses.

First, there is software. Software can be written specially for a single company to carry out specific applications (custom or bespoke) or it can be written to a general specification to carry out the same application in a number of companies provided they are prepared to mould their company's activities to the shape of the software rather than the other way about (packages).

With a huge, virtually homogeneous home market, packaged software has been the jewel in

the crown of the independent US software industry. The dramatic influence the advent of the microcomputer has had on the software industry is illustrated by the fact that the overall leader is now Lotus Development Corporation, less than five years old, which made its name and fortune through the developing and marketing of the first integrated spreadsheet package for personal computers.

It is this business which is now slowing. Mr John Ockendon, president of the UK Computing Services Association, noted recently: "The software products market is not now growing at the high rates it experienced in the early 1980s (from) a comparatively low base and that market is expected to grow by only 20 per cent a year in the future."

Many of the American software product companies are in difficulties and further resistance to the use of packages is expected in what they are describing as the industry "slowdown."

The first signs of a similar decline in the growth of the package market is now being detected in Europe.

Nevertheless, according to Input, a US-based market consultancy, the present slowdown is only temporary. It has been caused, in the US, by the state of the economy, placing budget constraints on companies and



Software application in the City: the equities dealing room at stockbrokers Phillips and Drew, where Data General's Hydra financial information management system is installed.

restricting software purchases.

Other reasons include confusion among customers spoilt for choice with many packages on offer from many vendors, fears that some highly priced packages are not as reliable as they might be and long installation times found with the larger, more complex products.

Input notes: "As these negative forces wane, the market will continue its healthy growth."

The second field of importance in computing services is the bureau business, made up of companies selling time on their own computers to companies who perhaps do not want to run their own data processing centre, who need extra processing capacity or who want to take advantage of special software offered by the bureaux.

Bureaux processing has always been the strongest element of the computing services business in the US and in Europe, but it is now the slowest growing.

According to Input, the US processing and network services market grew by only 14 per cent in 1985 to reach \$17.5bn.

Input notes: "Components of this market are beginning to experience difficulty in keeping up with the growth of other areas in the information services industry."

It says the market was aided by growth in four industrial sectors—banking and finance (18 per cent), discrete manufacturing (17 per cent) medical services (15 per cent) and on-line data bases.

Conventional processing worth \$1.9bn in 1985, will stagnate through to 1990, Input says it expects the processing/network services market to grow at an average of 16 per cent to 1990, while the information services market as a whole will grow 20 per cent annually.

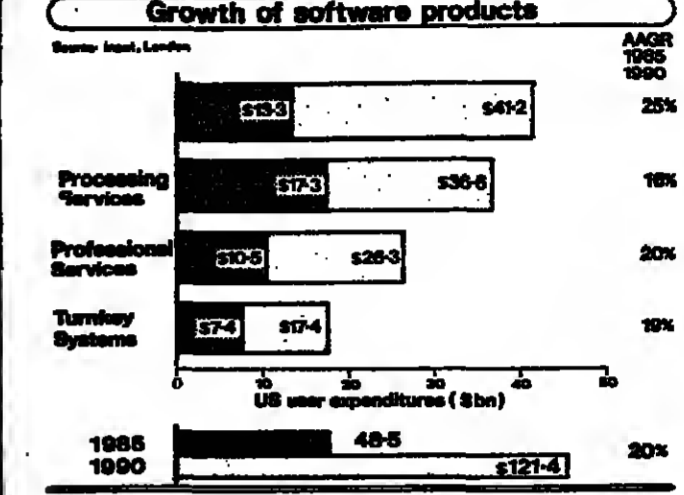
In Europe, processing services are expected to grow at only 10 per cent annual average growth to 1990 while integrated systems and professional services may grow at up to 22 per cent annually.

Integrated systems is a third major area of computing services. It includes computer aided design and manufacture, small to medium sized business systems and specialist niche markets. In each of these areas, computing services companies provide hardware and software as a complete package.

Professional services, which can be taken to include custom-written software is perhaps

the most strongly growing sector either in the US or the UK. One reason for this is a new determination on the part of commercial companies to have software written specially for them to give them a particular competitive advantage.

To some of these companies, the extra cost of a bespoke program over a package is of little importance. New techniques are being developed however, to produce programs which give the impression of being custom-written while in fact they are pieced together from already developed pieces of software.

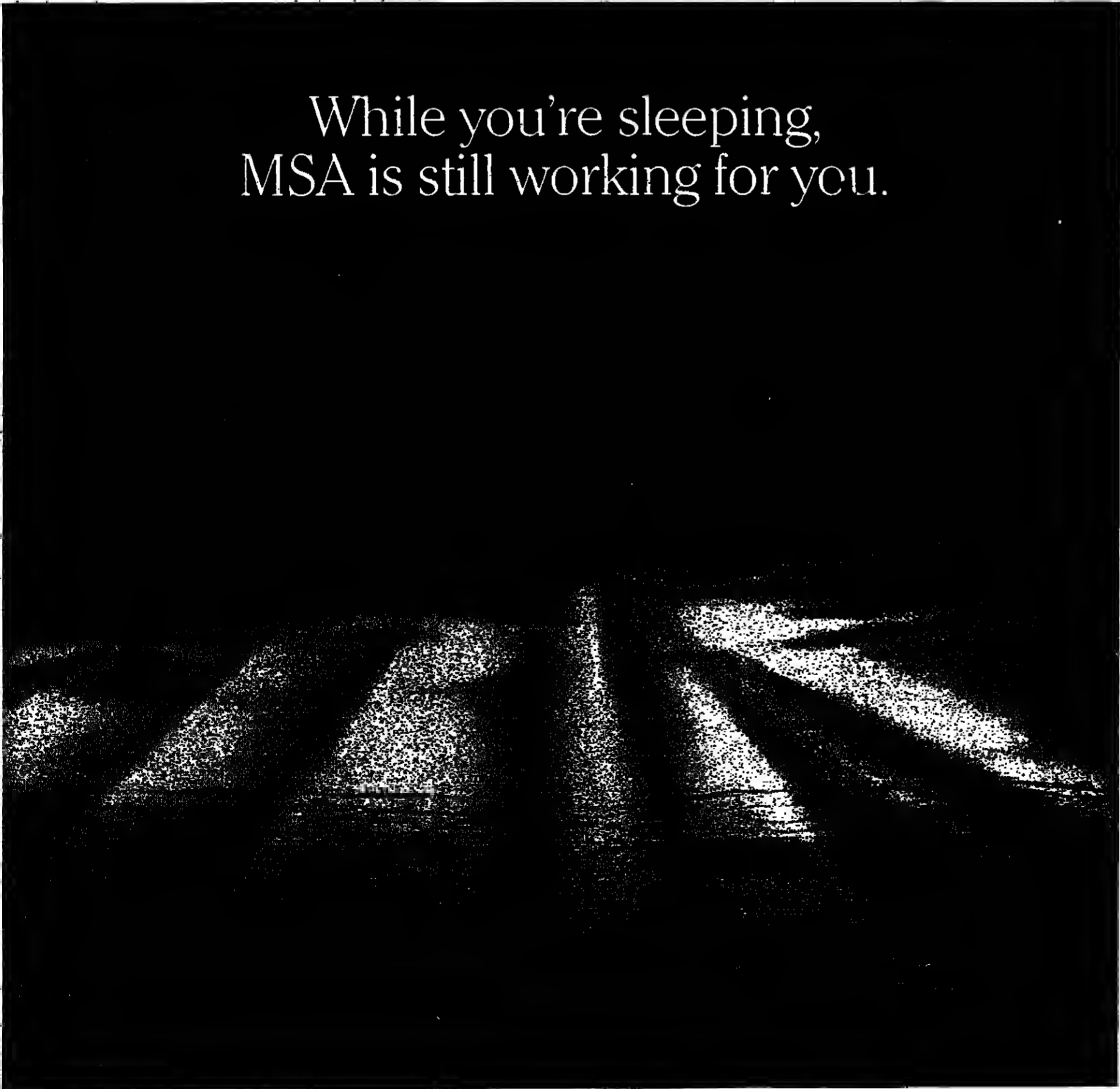


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pieces of software to automate particular functions—can be strung together in novel ways to create complete systems. Such methods make it possible to develop bespoke software at little more expense than the cost of a package. There should be no shortage of customers. According to the consultancy IDC Europe: "Demand for bespoke software from those users who require specific applications over and above existing products will continue to be strong, and, with a predicted average annual growth rate of 22 per cent, this sector will be worth approximately \$14.3bn in Europe in 1991."

These are methods in which European software houses have been becoming expert, while the Americans have concentrated on mass sales of packages. They are now the Europeans' best weapon in their efforts to take on the Americans on their own ground.



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Computer Software 2

UK Software Industry

Pressure on profits despite buoyancy

THE UK computer software and services industry is confused. While the overall market it serves continues to show healthy growth, competition both from home and abroad is strong. Furthermore, growth is not uniform, making it hard for companies to decide which areas to invest in.

The industry has expanded quickly, bringing in new companies from many different backgrounds. Hardware manufacturers, telecommunications suppliers and management consultants have joined the traditional software "houses" and bureaux in an attempt to grab a slice of the market.

In June of this year, a government-sponsored report from the advisory council for applied research and development (Acad) heavily criticised the UK industry for not being competitive and predicted a vast trade deficit in software by the middle of the 1990s. This report has been the subject of a heated debate about the real state of the industry's health, with many leading software companies rejecting its conclusions.

The UK software and services industry has grown by over 20 per cent a year for the past several years and, according to figures from market researcher International Data Corporation (IDC), grew by 23 per cent in 1985. IDC values the 1985 market at £2,041m. In the tenth annual survey of computer services in Europe, a report sponsored by the European computer services association and published at the same time as the Acad report, Doug Eyelons of the UK Computer Services Association (CSA), which participated in the survey, forecasts continued growth in the industry at about 20 per cent a year.

The CSA speaks for the broad range of companies that fall under the heading "software and services" in the UK. This includes large-scale computer network suppliers such as IBM and ADP. It includes consultants like Arthur Andersen, software developers such as Logica and CAP and product suppliers such as management science of America and Micro Focus.

"The industry is still very buoyant. But there is evidence of a pressure on profits," says Mr Eyelons.

The CSA monitors its member companies in its report on quarterly trends and Eyelons

says an increased number of companies have reported a decline in profits.

"In the first quarter of this year the figures were 23 per cent, while the second quarter shows 35 per cent. There could be a seasonal factor to take into account. Nevertheless, it is a high figure," says Mr Eyelons.

He argues that, given the continuing increase in revenues, this is not necessarily a sign of ill-health. Reduced profits could merely be a result of expansion. The industry has been active both in terms of acquisitions and in raising capital through share offerings in the last year. Mr Eyelons also points out that two-thirds of the UK service industry is still reporting increased profit growth.

The companies making a profit are likely to be working in specific areas such as consultancy services or value-added networks. The market for the more identifiable products of the software industry, the software package, is showing signs of slowing down.

Mr Eyelons says that the software package market is still growing, but not at the rate it was in 1983-84.

The result is that some package producers have moved towards providing services with their products. This has long been the style of software companies supplying the mainframe and minicomputer market. Now it is spreading to the personal microcomputer market.

Both Lotus and Ashton-Tate have recently beefed up their customer support services and at the same time have introduced separate charges for support. Others have followed. This is liable to lead to even greater confusion in the services market, as package companies begin to compete with traditional service suppliers.

"It is a very confusing picture at the moment," says Mr Jeff Urwin, managing director of Hoekyns, one of the largest established services suppliers in the UK and, like many software companies, US-owned. Hoekyns is a subsidiary of Martin Marietta.

"I think the market will grow but at about 20 per cent, rather

Leading computing services companies in Europe

Common interest groups* and companies with a minimum of 50% captive revenue

Company	Country of origin	Ownership	Major Services			European Revenue		Worldwide Revenue
			FA	CC	TU	FR	(1)	
Finisiel	Italy	IRI/Banca d'Italia					171.1	172.0
EDS	US	General Motors	+	+	+	+	132.6	126.4
Kommunidata*	Denmark	Local Government					68.1	71.2
Datascruiser*	Denmark	Independent					64.3	64.3
Kommunidata*	Norway	Local Government					64.1	75.8
Enidata	Italy	Controlled by ENI					61.3	63.3
Intel	UK	British Leyland	+	+	+	+	58.7	63.5
IDA*	Norway	Banks					54.5	54.5
Spadab	Sweden	Savings Banks					49.9	53.1
Kommunidata*	Sweden	Local Government					47.9	62.2
Falldata*	Norway	Savings Bank					36.9	36.9
VTK	Finland	Government					32.3	43.1
Skip*	Finland	Finland Savings Bank					32.3	32.3
Sparckamerne*	Denmark	Savings Bank					31.0	31.0
Falldata*	WG	Regional Banks					30.6	30.6
Compuser	UK	National Coal Board					30.0	30.0
Telekurs	Switzerland	Banks					30.0	30.0
Corred SpA	Italy	Chambers of Commerce					27.5	27.5
Dafa	Sweden	Government					21.5	21.5
Landbrugstata*	Denmark	Agricultural Co-op					21.3	22.1
Landbrugstata*	Sweden	Agricultural Co-op					20.5	24.9
Evandata	Sweden	Swedish Steel					18.5	18.5
Vestdata*	Norway	Banks					18.2	18.2
CVI	Netherlands	Netherlands Sportswear					17.3	21.7
Datamat	Italy	Montedison Group					17.3	17.3

Notes: Revenue (1) excludes hardware related revenues, including those derived from turnkey activities. Revenue (2) includes turnkey hardware elements. The worldwide revenue figure represents actual revenues, with nothing excluded.

Source: International Data Corporation, 1986.

UK-software and services

Market values, 1985

	£m	\$m	Share %
● Packaged Software	691	463	22
Hardware manufacturers	186	128	6
System houses	316	248	12
Independent vendors	1,063	844	41
● Custom Software/Consultancy	128	100	5
Hardware manufacturers	176	137	7
System houses	425	328	16
Independent vendors	739	569	28
● Training	126	98	5
● Freelancing services	172	134	7
Local batch	184	143	7
Remote problem solving	286	223	11
Remote maintenance	642	508	25
● Facilities management	39	30	1
● Total	2,620	2,041	100

Exchange rate = 0.770

Source: International Data Corporation, 1986.

U.S. Market

Sales back on track

WHILE THE US computer industry seems to be mired in a prolonged slump linked to a downturn in capital spending, the computer services and software sectors are generally healthy and in some cases are enjoying unprecedented growth.

The professional - services business, long considered the least glamorous part of the computer industry, has suddenly attained a new prominence. The \$10.5bn industry that provides advice to computer buyers on which systems to buy and how to configure them is expected to grow at 20 per cent per year until 1990, becoming one of the fastest growth sectors of the computer industry.

US software sales, which slowed last year, will move back on track with 20 per cent growth to reach \$17bn this year, US analysts predict.

How can software and services sales boom while hardware sales are sluggish? The explanation, according to industry analysts, is simple. Computer users are seeking computer "solutions," rather than simply buying more "boxes." Business sectors of computers - whether mainframes, minis, or personal computers, are trying to figure out how to use their computers more efficiently, how best to network computers and how to find computer solutions to new business problems.

Computer users are going through a period of re-evaluation, suggests Mr John Scully, president of Apple Computer, the company that is particularly prominent in the personal computer sector.

"In the contacts we've been making with business, we find more and more companies are reaching some critical mass with their personal computers. They are now saying, 'We've made all this investment over the past two to three years, what are we getting from it? We see the slowdown in the computer industry being driven by a general re-assessment about the value of the personal computer and how it fits into business,' he says.

Source: Input

than the 23 per cent last year," he goes on. Mr Urwin says that the crisis that has hit the hardware manufacturers will hit the software and services sector in the next year. He points to IBM's and DEC's recent actions as examples of companies facing up to the squeeze.

"IBM is retiring people early for the first time for years. And earlier this year, DEC slashed its discounts to original equipment manufacturers."

Mr Urwin suggests that much of the confusion in the UK software and services industry is the result of the structural changes that have taken place since the beginning of the 1980s.

The cost of supporting a system with software and people has grown more important as hardware prices have fallen. It is now common for software and services to cost as much if not more than the hardware it is to work with.

The falling price of hardware has also reduced the hardware manufacturer's profit margins. They are increasingly looking to the software and services sector for revenues. This has led to hardware manufacturers courting software companies to build hardware suppliers to take software much more seriously. The US telecommunications giant AT & T has based its move into the computer business on its networking services and its

have a broad base to meet the demands of this market."

He notes that one large sector of the market is under great pressure because of skill shortages. The UK Government is losing many of its best people to lucrative jobs in industry.

This, in turn, is forcing the Government to buy skill in from the private services sector, he says.

Mr Eyelons adds that the CSA is lobbying hard to increase this trend on the grounds that it fits in with current Government strategy to push more services into the private sector.

The CSA has suggested that data processing services should be added to a list of services that should move into the private sector in the current green paper on local government. The legislation will come into effect next year.

"There were five categories of service in the original paper, including cleaning, maintenance and catering services. We have asked them to add data processing," says Mr Eyelons.

This could mean a bonanza for the industry as government turns to private industry for software and services. It will bring the UK into line with most other western countries, which have had healthy software and services industries, indirectly supported by their governments for years.

Philip Manchester

US professional services market

Top largest companies' world wide revenues in \$m, 1985:

IBM	1,369
Computer Sciences	625
Burrniguss	575
Arthur Andersen	505
Electronic Data Systems	235
Peat Marwick Mitchell	228
Flanning Research	187
Cap Gemini America	159
Logicon	150
Grumman	144

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Computer Software 3

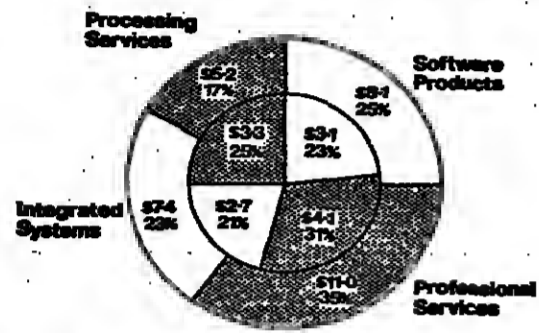
European software and services market

	£m, 1985	% share, 1985
PACKAGED SOFTWARE		
Hardware manufacturers	2,992	18
System houses	858	5
Independent vendors	1,358	10
Sub-total	5,198	34
CUSTOM SOFTWARE/CONSULTANCY		
Hardware manufacturers	621	4
System houses	1,015	7
Independent vendors	2,816	18
Sub-total	4,452	29
TRAINING		
	673	4
PROCESSING SERVICES		
Local batch	1,493	10
Remote problem solving	1,428	9
Remote transaction	1,943	13
Sub-total	4,864	32
FACILITIES MANAGEMENT		
	172	1
TOTAL	15,360	100

Source: International Data Corporation, 1986.

The \$32bn information services market

The market in W. Europe by 1990



Japan's Software Industry

Shortage of programmers

JAPAN'S Ministry of International Trade and Industry (MITI) is to launch an \$8.7m (Y2bn) research effort this year aimed at producing a software system for use in training computer programmers.

The project is given urgency by recent MITI predictions that Japan will experience a shortfall of 600,000 software specialists by the end of 1990. The number of software engineers and programmers required is currently growing by 26 per cent annually, while supply is increasing by around 15 to 17 per cent.

The programmer shortage is a key difficulty for Japan's \$3.7bn (Y1.6bn) software industry, but other uncertainties include the promise of AT&T's UNIX as a possible alternative to IBM's operating systems, the shift towards distributed data processing and its attendant boost to the software package market and the increasing influence of the VAN services sector.

A MITI spokesman said the program-training software system now under development will cover all aspects of computer programming and enable students to work independent of instructors. MITI is also to look into the development of standardised curriculums for software studies. No such curriculums exist at present, and the pass rate last year among computer school students taking state-programmer examinations was a dismal 15 per cent.

There are around 150 computer schools across Japan with an intake of around 65,000 students per year, a capacity well short of overall requirements.

Characteristics
Japan's software industry is characterised by its heavy dependence upon the whims of a range of individual computer manufacturers, whose equipment is generally incompatible. This has resulted in a preponderance of customised software development, and is one factor behind the typically small scale of software business in Japan. 1986 industry survey estimates 2,556 independent software companies, industry sources estimate this to equal only a third of the total number of companies considered to be information services industries. These companies are usually too small to make a measurable impact on industry trends.

Japanese users have in the past seen the provision of customised software by computer manufacturers as the expected inducement in hardware purchases, but the programmer shortage is now necessitating a switch to package software as a means to meet data processing deadlines. This trend has been supported by the increasing acceptance of MS DOS in the personal computer environment. Soft Bank for example, one of Japan's largest package vendors, expects sales to rise 35 per cent this year to \$64.4m (Y14.8bn).

It believes that business packages now account for 65 per cent of the market, a dramatic rise from the 34 per cent figure of early 1984, when game software predominated. Software competitiveness remains far away however in the IBM-dominated mainframe market. The Japanese govern-

ment, mindful of the embarrassing 1981 IBM/Ribachi patent infringement case is anxious for change, and has responded with two MITI-coordinated projects: "Sigma" and "Tron."

The Sigma project is an attempt to develop a comprehensive database of software tools based on AT&T's UNIX operating system, and is supported by all Japan's major software and hardware vendors.

Tron is an effort by Japan's eight major semiconductor firms, and Tokyo University researchers, to develop an independent operating system for use by Japan's computer makers.

Confusion

The projects have generated both optimism and uncertainty. Mr Kiyooki Tamura, development labs' director of Japan's second largest software developer, Nixdorf Business Consultant, (NBC) comments: "No one knows whether it will work out, it's quite a switch from IBM architecture to UNIX-oriented architecture, a great change."

"But Japan's software houses are very confused over the different manufacturers' strategies concerning O/S interfaces, so they are interested by any means to get a common software interface environment."

An important question which users face is how the great volume of installed IBM-based custom software is to be accommodated within a UNIX environment. The answer lies partly in the growth of value added network (VAN) and communications services, which specialise in the linkage of the systems of different vendors.

The VAN services sector is however an investment-intensive field, and although at least 10 of the leading software service firms are participating, the majority of companies are continuing to operate along conventional lines.

Mr Tamura says that "while software development still shows a healthy growth rate it is easier for small firms to stay in their old-fashioned type of business". The biggest growth area in the software package market is in the development of "fourth generation languages" such as MITI's proposed programmer software, which will allow the user to bypass the programming phase in software development.

Two of NBC's best-selling products are, for example, the B-Form and B-Plus packages, which allow users to implement directly sales control and financial analysis programs tailored to their individual requirements.

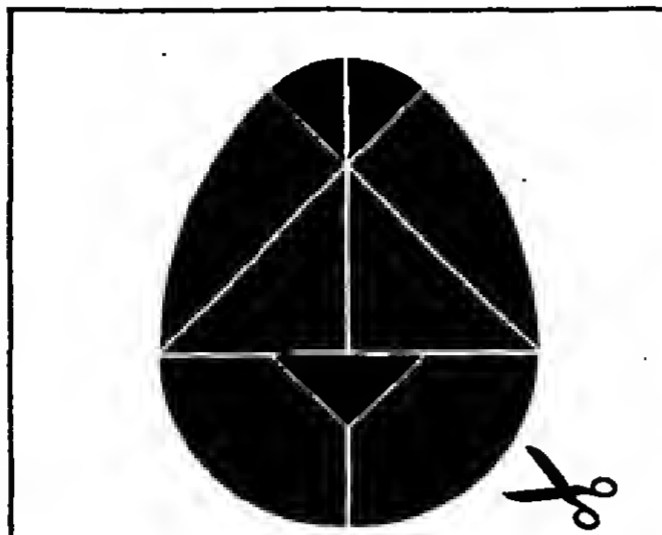
Another trend is towards the establishment of offshore software-writing subsidiaries in neighbouring Asian countries, enabling cost saving in a very labour-intensive field, but these enterprises have often found language barriers to be a major limitation.

Japan's database market is also ripe for growth. In a recent report, the Japan Economic Research Institute noted that Japan already lags far behind the US in the use and standardisation of databases.

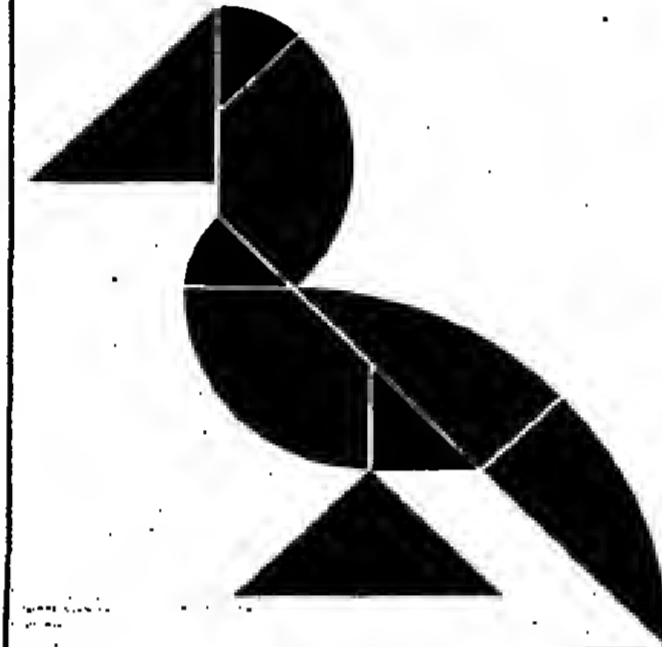
The institute recommended that increased standardisation of data communication protocols and the relaxation of Government regulations concerning electronic business transactions could stimulate market expansion.

Roy Garner

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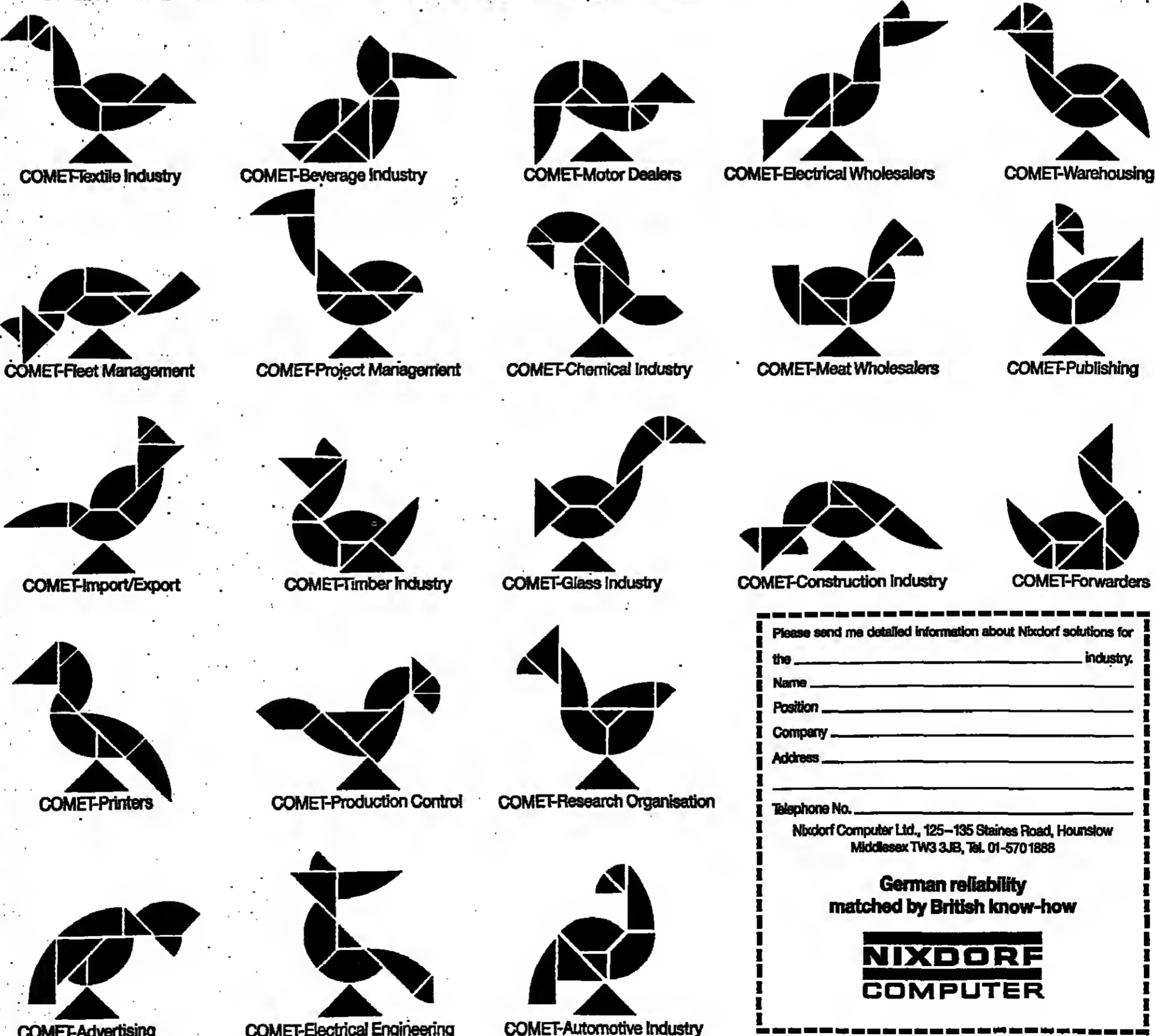
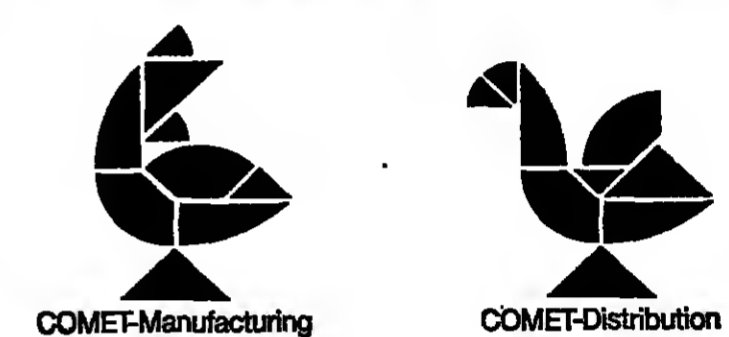
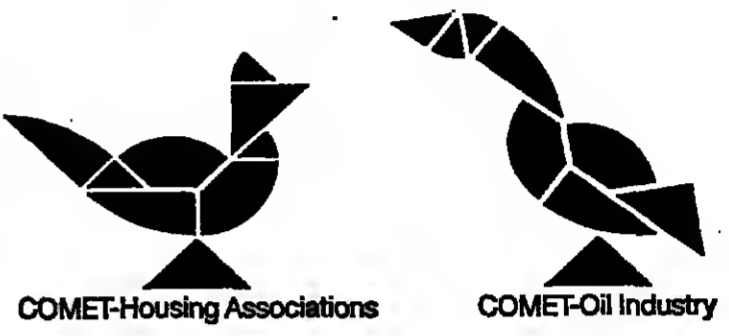
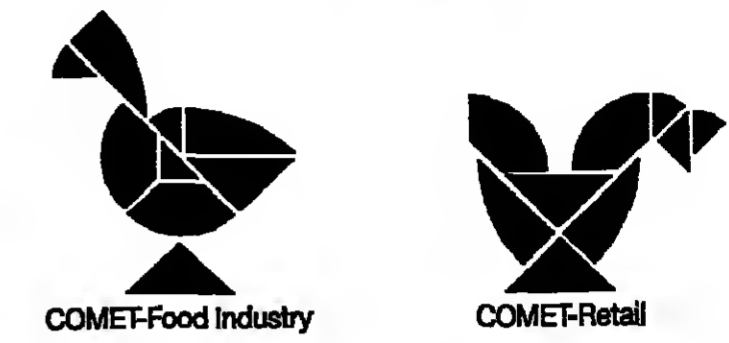
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Market growth of computer services

Country	1984		1985		% dollar growth
	(\$m)	(£m)	(\$m)	(£m)	
Belgium	445	236	526	26	5.966
Denmark	450	494	484	18	0.972
Finland	316	377	377	19	0.964
France	2,541	1,389	2,589	29	0.967
Germany	2,349	2,708	2,708	23	0.961
Greece	8	19	19	28	0.916
Ireland	1	101	101	23	0.970
Italy	1,386	1,502	1,502	24	0.915
Netherlands	777	948	948	22	0.980
Norway	373	426	426	17	0.945
Portugal	34	42	42	26	0.983
Spain	353	444	444	26	0.944
Sweden	544	674	674	26	0.957
Switzerland	594	611	611	21	0.960
Turkey	11	13	13	24	0.986
UK	2,123	2,639	2,639	23	0.986
Austria	239	283	283	23	0.961
EUROPE	12,839	15,300	15,300	22	

* The 1984 market data has been restated at the 1985 dollar exchange rate to allow growth comparisons.
 Source: International Data Corporation, 1986.



The international financial sector demands increasingly sophisticated software systems: above: part of the foreign dealing room at Morgan Guaranty, London

French Software Companies

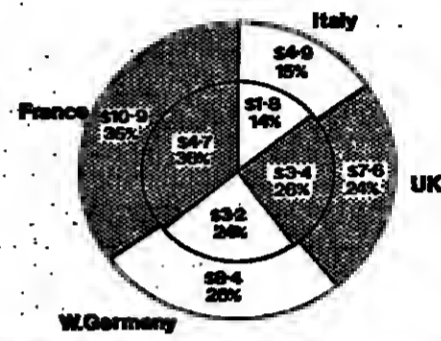
Setting the pace in Europe

FRENCH SOFTWARE companies are starting to come out of their shell. The largest companies in Europe in their sector, the cluster of high-performing French groups in computer services are now advancing to the forefront of high technology used increasingly in everyday activities.

Many of the companies — Sociétés de Services et d'Organisation Informatique or SSIs — were founded in the 1950s and 1960s, often as spin-offs or subsidiaries of large corporations. For years they remained relatively discreet. But now the teams of highly motivated engineers at their helm are making a name for themselves in marketing and

financial expertise as well as in their basic trade of computer know-how. The best-known example of the growing aggressiveness of French SSIs is Cap Gemini Sogefi, the European leader in this field (excluding the software operations of IBM). At the beginning of this year it took the landmark step of expanding deep into US territory by taking over the consultancy division of CGA Computer Inc.

France: largest information services sector in Europe



Total market: 1985 \$12.2bn - 1980 \$3.7bn Source: Inpat, London

CEGID, a young Lyons based software group which claims to have the highest profits/sales ratio of any French SSI, made a much remarked entry on to the "second market" or unlisted market in Lyons in June and has signed up a promotional accord with Alain Prost, the champion French Formula One driver.

The company, specialising in the development of information technology packages for small and medium sized companies, expect to boost turnover to over FF100m this year from only FF40m in 1985. At the other end of the age scale, Compagnie Generale d'Informatique, the French leader in developing multi user software packages for industry, which was founded 35 years ago, emerged from its customary discretion this summer to make a 400-times oversubscribed entry on to the second market in Paris.

Mr Robert Mallet, the founder and chairman, says the flotation was necessary to adapt the FF750m turnover company to the faster pace in the information technology world. Many French software groups owe at least part of their growth to government financed technology programmes spreading from weapons development and the space and nuclear programmes to the national Minitel videotex system. Cap Gemini Sogefi, as well as SESA, part of the Compagnie Generale d'Electricite group, and Stelia, whose main shareholder is Credit Lyonnais, have all developed expertise as part of the French system.

Now the time has come, however, to turn away from excessive reliance on any form of state patronage. Mr Mallet of CGI believes that, after the initial impetus given to French information technology in the 1960s and 1970s through government projects, the industry has now attained a momentum of its own. "Computers have become part of the collective mentality," he says. "Companies are starting to think of their computer systems as part of their patrimony. Working out ways of improving these systems thus becomes integrated into their overall strategies."

As a further sign of the retreat from reliance on government contracts, Sema-Metra, a software company set up by the Paribas group in 1956, is bidding to develop a network for value-added information technology services in association with IBM to profit from progressive deregulation of French telecommunications.

It is competing with another consortium formed by the Suez financial group with Olivetti of Italy and Telegon, the software subsidiary of the Direction Generale des Telecommunications, the French telecommunications authority. Mr Pierre Honell, the ex-Texas Instruments manager who took over as Sema-Metra chairman in 1977, says he wants to push Sema-Metra increasingly into wider fields away from pure association with information technology.

SESA is another group which has enlarged its horizons beyond its original close ties with the French government. SESA, set up in 1964 by Jacques Stern, the present head of the state-owned Bull computer group, based its early growth on development of the Transpac nationwide packet-switching system. This handles nationwide data traffic for business and individual subscribers (including the surging traffic in videotex communications over the Minitel network).

Turkey systems SESA is another group which French software houses in that 75 per cent of its business is in building turkey systems such as a command and communications network for the French tactical air force based in Metz, eastern France and part of the Compagnie Generale d'Electricite group. Another software company in the CGE group, also with broad management autonomy, is Generale de Service Informatique (GSI). The chairman, Jacques Raiman, says his company has "the culture of a small business." GSI has built up its

growth in specialised areas, including videotex systems for the travel and tourism industry, and car dealers and systems for companies' personnel management. Mr Raiman has taken over as chairman from Mr Edouard Ballard, now the French Finance Minister.

GSI, which makes 40 per cent of its turnover abroad, has also constructed over the last decade a network of European subsidiaries by taking over companies in Switzerland, West Germany, Spain and the UK. "Last autumn GSI broadened its global spread with an agreement with Reynolds & Reynolds, the US car dealer information company, under which the two groups are pooling resources worldwide. GSI's motor trade division has developed a videotex network, linking IBM personal computers, which supplies computerised information on sales, inventories, spare parts and warranties to 5,000 car dealers in nine European countries.

The link-up creates the world's biggest automobile information service covering a total of 17,000 dealers. GSI has the right to develop and sell the joint service in Europe, with Reynolds & Reynolds carrying out distribution in the US, Canada, South Africa and New Zealand.

Raiman, a mathematical economist by training, says GSI's success is based on turning away from a "do everything" strategy and "becoming leaders in Europe in certain fields."

Why have French software groups prospered while hardware companies, in the main, have failed?

Raiman offers this clue: "The Plan Calcul (the government's computer development strategy, formulated during the 1960s) made people interested in computers—but put people off from going into large bureaucracies. It created a large pool of talent service sector which has profited."

David Marsh
 Paris



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Western European computing services

© Vendors with worldwide revenues in 1985*

Vendor	Country	Worldwide revenue
Cap Gemini Sogefi	France	247.2
Compaq International	UK	163.4
GSI	France	129.1
Sema Metra	France	125.5
Datav	West Germany	121.5
CSI	France	102.1
SESA	France	96.1
Thorn EMI	UK	94.1
CCMC	France	93.3
Valme	Netherlands	84.2
SGI	France	83.5
Silgo	France	78.9
Logica	UK	67.5
Telegon	France	65.2
SDI	UK	64.2

* Figures refer to revenues derived from pure software and service activities.
 † Includes S&S division in the US.
 ‡ Includes Datacenter and Software Sciences.
 Source: International Data Corporation, 1986.

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Programming Environments

Quality is a critical factor

WORDS ENDING with "ity" seem to dominate any conversation about programming environments. The password is "life cycle", but from there on, expect the experts to speak of reliability, quality, maintainability, and other such imponderables.

All these are abstract terms which evade basic dilemmas. Programmers see themselves as skilled professionals, whose job is not just to code, but to analyse and interpret programming, they say, demands skill, experience, flair, and talent. How then, do you impose a "standard environment" of any sort upon something which its proponents see as a creative skill, an "I did it my way" process?

The problem is that computer programming has become too important to leave to individualists. This applies especially where organisations are embarked on vast projects which involve hundreds, or even thousands of programmers in a number of locations, possibly in different countries. In military, defence, and real-time projects, quality is critical for more reasons than cost-efficiency.

There is an industrial revolution going on in programming, which demands that the process becomes more productive in quantifiable, measurable terms. "Programming environments" are supposed to give the creative programmer tools, but they also define limits.

Success is yet another abstract, which has no standard measure. "Quality" is wrapped up with "maintainability" and "productivity".

The favourite measuring stick of the industry is Dr Barry Boehm's Constructive Cost Model (COCOMO), a formula which takes over a dozen factors into its calculations on code production. Most estimates set the number of lines of debugged, tested, working code at between six and 10 "perfected" lines of code a day.

The move to provide programming environments has been encouraged by large com-

panies and government authorities, which have the most to lose on large, complex projects. The aim is to apply the quantifiable rules of engineering to something which is essentially creative, within whatever discipline is used.

"Methodology" is the key; the word is used to denote a consistent set of rules used throughout the life cycle of the software. All programmers on the team use a common set of tools for design, coding, testing of programs. These are likely to include some sort of automation: either code generation, or modules of re-usable standard code.

There is usually some sort of quality assurance, carried out by someone unconnected with the actual project but familiar with the environment. There also has to be tight control of documentation, without which any project collapses into chaos, and a reliable way of restricting access to modules so that any changes to code are authorised.

"This is only a tiny change; it won't take a moment" is a dreaded phrase which sums up the problem. Programmers are notoriously bad at filling in forms of any sort. Unlogged, unrecorded "debugging" in which new mistakes creep in, is a major problem, either dealt with by a product such as Ford Software's Lifespan, or built in to the programming environment so that all edits are automatically logged.

When a project is directed within a programming environment, productivity goes up, and the software produced increases in quality, including reliability, flexibility, and future maintainability.

This sounds too good to be true—and it is. An "environment" sets limits. This might mean that the tools may not be portable outside their actual hardware host, or the limits might be set by the education and training of the programmers themselves. One problem is that computer folk espouse different methodologies like religions, so it is in everybody's



Wang "Office" software provides the Sedgwick Group with electronic mail, messaging, directory capabilities, list and time management and word processing. The system also hosts the group's data processing needs, and can communicate with the company's mainframes

interests to set some common parameters.

This concept is supported by the "IPSE": Integrated Programming Support Environment. Much of the money provided through the government's Alvey scheme has gone to building IPSEs, and a Software Data Library which will pool different approaches to common problems.

Coding is not the most important stage of a software project, since it is merely the execution of a design. The Structured System Analysis and Design Method which is the defined standard for government projects, recommended by the CITA (Central Computer and Communications Agency) is just one of many such "models" which provide a framework for design.

Most large consultancies have their own methodologies such as Arthur Andersen's Design/1 or the Information Engineering approach developed by IBM-database guru James Martin and now used by Arthur Young.

Most companies and software houses adopt a recognised methodology such as Learmonth and Burchett, Youden, Jackson, or CACI.

These diagrammatic design tools are often linked with specific software development tools. "Software tools" is another vague phrase which might include operating system, editor, utilities, database, and the programming language itself. One large British-based consultancy, Logica, has an entire division, known as Sesame, devoted to evaluating various tools and approaches, and recommending the appropriate mix to each project.

IPSEs do not come cheap. System Designers Ltd, SML, and GEC Software are among the giants whose IPSEs are to be released for commercial use. GEC's GENOS starts at £8,000 on a Sun workstation, or £24,000 on a DEC Vax 11/730.

That does not mean that the average commercial user is doomed to using patchy, inadequate, badly written software. The IPSE movement is just as relevant to the workaday world of accounting applications. There are dozens of commercial "programming environments" which address one or some of the areas dealt with by IPSEs.

Used loosely, the term describes anything from a relational database and its satellite tools, to an applications generator of the sort available for personal computers and multi-user "distributed" machines.

Cullinet's IDMS, ADR's Datacom, Cincom's Supra and Software AG's Adabas are typical IBM mainframe examples of database environments. Smaller-scale "applications generators" work within a particular operating system such as Pick (for example, Aston Technology's System Builder) or Unix (BBJ's Today, Kalamazoo's Appgen) or in a specific hardware environment (Cortec's DEC-based Applications Factory, Philips' Maestro workstation). There are Cobol-based tools such as PPL's Haalia, and Micro Focus' Workbench.

At an even more specific level, the applications suppliers MSA and McCormack and

Dodge have grabbed the IPSE idea and adapted it to make their packages easy to customise and maintain: MSA's "Intelligent Environment" and McCormack and Dodge's "Millennium" are programming environments.

In fact, though such applications lack the critical life-or-death factor of defence programming, developments in the commercial world are driven by short-term economic realities. They take hold faster than the grand plans of committees, and the results can be measured in terms of productivity and service to users.

Claire Gooding



The move to provide programming environments has been encouraged by large companies and government authorities. Above: administrative operations carried out on an IBM multifunction terminal.

A consultancy case study: how EDS has taken computer services out of the hands of Unilever, the chemicals giant.

A grand-scale project

THERE IS a point at which "house-keeping" jobs take so much time, energy and effort, that it is worth paying someone else to do them. For many organisations, particularly multi-national manufacturers, computing rates as just such a domestic chore.

Large companies whose main business is far removed from computing have had a variety of approaches to the problem: some had DP departments which grew into independent computer services bureaux.

One such, the chemicals giant Unilever, once sported an offshoot—Unilever Computer Services. The company known as UCSL exists no longer; earlier this year it was swallowed by the US-based computer services giant EDS as part of Unilever's effort to consolidate its communications strategy. In April, 1984, Unilever signed a 10-year contract with EDS for its entire computer facilities management, including a massive network project costing £2.5m.

EDS itself was bought out by General Automation for very similar reasons. GA wanted to contract out its computer operations to a specialist, so it acquired the world's biggest.

EDS has been responsible for the building up of GA's long-term strategy, including the MAP Motoring Automation Protocol, which is formulating the technology rules for an industry-wide standard.

Unilever saw the problem of co-ordinating international telecommunications as the key to its entire information technology strategy. It decided to dump the entire problem into EDS's capacious lap and get on with its own business.

As part of the relationship, EDS took over UCSL, and absorbed the staff; not entirely without problems, due to its strict contracts of employment and its discipline of conformity which rivals even IBM's rules.

EDS does not like to see itself as a grand-scale consultant, although its activities are a logical extension of the function of consultancies. Many computer consultancies actively implement computer solutions rather than just advising and recommending. EDS sees itself very much as an implementer.

"Consultant is not a term we'd use of ourselves," says Gary Fernandez, chairman of EDS's International Division. "Typically the result of consultancy is a piece of paper. We get paid to do things, not advise."

In the case of Unilever, the aim was a private telecommunications network which would connect 200 Unilever sites, across 40 different countries, serving a total of 40,000 staff.

The task was to convert Unilever's private analogue telephone network to a digital system which could handle voice messaging, and handle 35,000 calls per day with almost immediate connection. The network also handles data transmission, and re-routes calls automatically if problems occur on the line.

It also provides callers with a variety of services such as call-back, call-diversion, and call-line identification.

EDS supervises the network from a central network management centre in London, diagnosing and correcting faults, and logging calls so that Unilever is able to analyse its network usage and bend it to the needs of individual sites.

"It's a complex thing to control, but there's a competitive advantage in getting it right," says Fernandez. "It takes experience to arrange information, and do it within price constraints. EDS has been working towards the idea of turning data processing from a cost-centre to a profit centre

since the early sixties; we specialise."

"In the past there have been few successes when companies have spun off computing into wholly-owned subsidiaries, the reason being that you can't focus on your main business and specialise in others. People pay the premium if they get better value from their systems."

Fernandez believes there are two ways of proving the effect of EDS's service. At the practical level, there are specific factors which can be measured: the amount the system is used, how often it breaks down, and other day-to-day considerations.

At a higher level, EDS can't be considered to be successful unless Unilever is also visibly so.

"If Unilever becomes more profitable, and increases its return on equity," says Fernandez. "It does us little good to make a profit if our customers go bankrupt. We must be seen to be of value to the business."

The real test is whether Unilever users are happy. The private telecommunications network is the largest such in Europe, and possibly the most sophisticated. Certainly, it is the first time a company of Unilever's size has handed such a project to a third party. The system went live in April last year, two months ahead of schedule, and now Unilever is working towards the long-term aims of electronic mail, data services access, and voice mailing.

The domestic parallel of somebody who "does" for a household is a useful one, since computing can be a very personal activity to a company. Companies justified their offshoot computer service arms by saying it was necessary to have a specific understanding of the business in which the parent company operated.

EDS insists that it is a computer expert first and foremost might be a double-edged sword. The Unilever experiment has already delivered some results, but the facilities management contract has another eight years to run before its effectiveness can be judged.

Fernandez is confident other companies will follow EDS's route of supplying entire wall-to-wall services—"There's a lot to be said for economies of scale," he says.

Claire Gooding

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Computer Software 7

Relational Database Systems

New contenders enter the marketplace

BEFORE THE days of database, programmes worked only with their own data files.

For example, the data contained in a payroll file would only be available to, and processed by, a payroll programme.

If payroll figures were needed to produce a report on manufacturing costs, a separate file would have to be created for a manufacturing costs programme, containing duplicated data which had to be kept in step with the original data in the payroll file.

The use of database techniques allows data to be kept independent from programmes, allowing different programmes to access, manipulate and update the same data file, regardless of the manner in which the data is physically stored.

In 1970, Ted Codd, an IBM scientist, formulated the concept of a relational database system.

Codd subsequently left IBM which has only just begun offering a relational database product, DB2, during the course of this decade.

IBM does not like to force the pace of technological change on its customers. For years, they had become accustomed to working with IBM's hierarchical database management product, called IMS.

Advances The hierarchical database was a significant advance on its forerunner, the bill-of-materials processor where an item of data or product could be exploded into assemblies, sub-assemblies and so on down to the individual component level.

However, different products may use the same or similar sub-assemblies, and one way found to get around this complication was to use an alternative model called the network model, involving the use of multiple pointers between data elements.

As an alternative to the hierarchical model, the network model is losing favour because as a database grows, so the complexity of the data became increasingly difficult to manage.

In the relational model, data is not only independent from programmes but from other data

as well, and is stored in tables. While IBM was pushing IMS, independent third-party software vendors such as Cincom, Cullinet and Applied Data Research offered their own competitive alternatives to IMS, gradually incorporating relational features into their database management systems (DBMS).

However, to compound the financial fix which Cullinet has found itself in recently, the company's pseudo-relational IDMS/R has fallen foul of Ted Codd's irritating habit of moving the goalposts for what constitutes a truly relational system.

Cincom on the other hand, decided to wipe the slate clean and start again with a system designed from the outset as a relational system called Supra, despite years of investment and development on a large number of add-on products to its Total DBMS.

When Codd originally formulated the relational model in 1970, there were two basic rules. Last October, he published 12 significant rules in a leading US computer journal.

The following week, in the same journal, he identified a total of 42 rules which must be satisfied in order to measure the relational capabilities of a DBMS that claims to be relational.

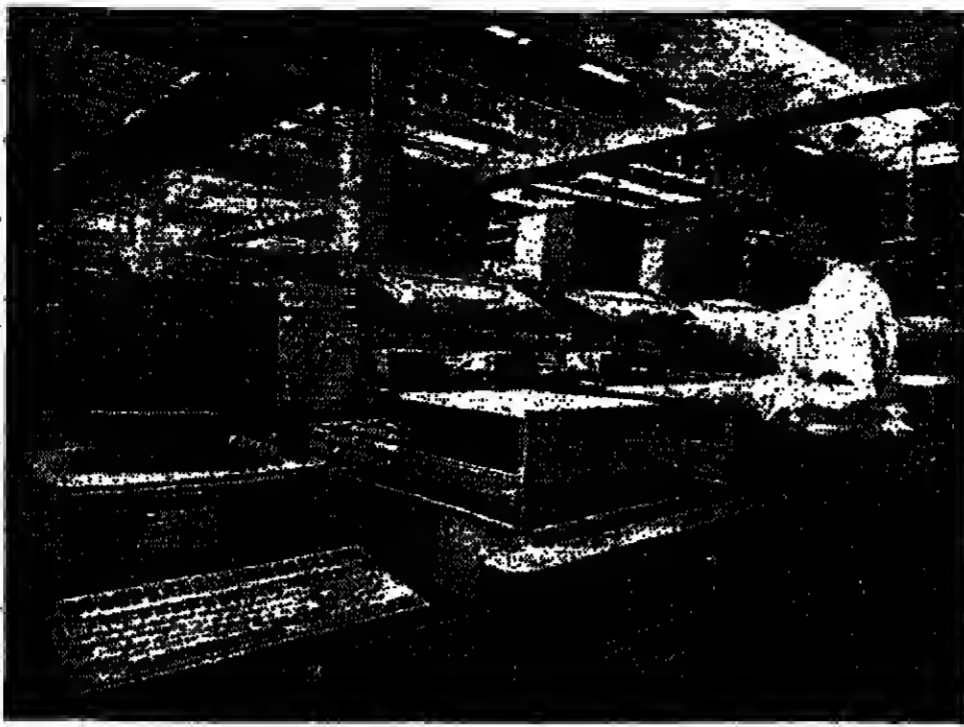
IBM's DB2 scored 23 points out of 42, while ADR's Datacom/DB and Cullinet's IDMS/R only scored five and four points respectively because it had not been announced at the time.

Even on the original 12 rules, ADR and Cullinet scored no points.

This prompted a rebuttal the week after by Cullinet's John Cullinane, followed by furious correspondence and articles in the computer press which still rages to this day.

The question is: does it matter if a system is not truly relational? ADR argues that the customer does not really care as long as it does the job.

Cincom believes that it does matter because a truly relational system provides the flexibility to cope with information needs of the future without affecting current systems.



OLIVETTI, Europe's largest manufacturer of personal computers, is extending its range of software systems into a complete "family" under the title of Olivetti. It includes systems for word processing, database, spreadsheet, business graphics and a number of utility facilities such as a multi-lingual spelling-checker and electronic mail, together with a desk-top system in which all these packages are integrated.

The traditional third party suppliers of database management systems for IBM mainframe computers originally conceived their products in the days of batch computing.

Nowadays more encompassing functions and reports are required, as well as the need for integrated systems, demands for real-time information, round-the-clock operations, larger data files, remote communications, and data security.

These suppliers now face a challenge from newcomers such as Oracle Corporation, Relational Technology and Battelle Software, who having moved up from the minicomputer market, have been accustomed to working within this modern environment, albeit on a smaller scale.

ICL for one, has recently signed a deal with Relational Technology to supply Ingres on ICL hardware worldwide, having previously supplied its own version of IDMS under licence from Cullinet, while IBM supplies Oracle's DBMS under a "private label agreement."

Another strong contender in the relational database market is the Pick operating system, originally available only on McDonnell Douglas (formerly Microdata) minicomputers.

Pick has been available for some years on Honeywell minicomputers supplied Universal Computers (UCL) and is now supplied by Honeywell itself too.

One argument used by DBMS suppliers whose products do not comply with the relational model is that relational systems are slow, an argument refuted by Codd who claims that this is merely an excuse for not doing the necessary development work because there is no inherent reason why relational systems should be slower than any other.

The fact is that at this stage, no relational system can cope with the high transaction volumes required for dispensing cash from banking terminals or making airline reservations from airports dotted around the world.

Nic Birles, Relational Technology's vice president for international operations agrees.

quarter of next year. Olivetti claims 20 per cent of Europe's personal computer sales—"we believe we should be offering the end-user a complete system, from hardware to operating systems and application software. It is this strategy which has given us such success with the M24 computer," says Mr Bob Garrett of British Olivetti.

Pictured above is the Olivetti production centre at Scarmagno, Italy, where final tests are being carried out on M24 computer systems.

Ingres is now half the speed of IDMS, but the product is only five years old and during this time we have concentrated on making it reliable," he says.

"With an average speed improvement of 40 per cent to 50 per cent a year, we expect to catch up in three or four years, but more significantly, the culture of business is shifting towards local autonomy with global access to information.

"The rate of increase in transaction volumes is pushing the capabilities of large mainframes to their limits. Also the cost of telecommunications is not decreasing nearly as fast as the cost of computing.

"The general move towards modern distributed data processing makes speed less important, and relational systems are better suited to this type of environment," he adds.

"There is also a question of data security—people worry about all the information for a company being contained in one large centre."

Boris Sedacca

Case study in programming: how Phillips' Maestro distributes power for the Guardian Royal Exchange. Claire Gooding reports.

Route to lower costs and higher productivity

GUARDIAN ROYAL Exchange faced the same problems when evaluating its programming environment as any large company: long lead times for development projects, too many demands made upon too few resources.

"We were trying to get costs down, and the way to do that was by improving programmer productivity," explains David Lodge, manager of technical support at GRE at its Lytham St Anne headquarters.

GRE is a composite insurance company, dealing with all classes of insurance including life, fire, motor and accident. The company is one of the largest IBM sites in the UK, running large IBM-compatible mainframes with distributed IBM 8100 machines using the IMS database management software from IBM.

GRE had introduced an "Information Centre", an IBM concept for delivering end-user services, which had some impact. However, the demand for traditional (if more sophisticated) data processing systems kept growing, so the applications backlog grew with it.

Rather than recruit more staff, GRE's reaction was to assess its systems. It introduced a programming environment which would fit into its existing systems strategy, but concentrate on the programmer productivity problem. The system was Maestro.

The system was Maestro, one of the pioneers of software engineering and productivity tools, developed by German firm Softlab in the early eighties, and sold by Phillips Business Systems.

In selecting a programming environment programmer productivity may be the top priority, but it is by no means the only one. The power of a mainframe cannot always be spared for the intensive process of software development. Another important element is control for systems development to be effective in the long term, it has to be controlled and co-ordinated.

Maestro broke new ground in its approach to programmer productivity because it concentrated a set of integrated tools on a custom-built work-

station for programmers. The virtue of Maestro, and one of the reasons that Phillips adopted it, was that it could be used as a "front-end" in any existing hardware and systems environment, and did not demand that a company abandoned its existing investment in information systems.

Maestro was ahead of its time. Its approach was to distribute programming power on multi-user systems without losing contact with the central mainframe. "Portable" operating systems have recently popularised the technique of developing on one machine and running the completed software on another host; six years ago it was rare common.

Maestro used this technique, but on a very specialised workstation, providing a wide range of programming tools. Up to 24 such workstations are supported by the Phillips P7000 minicomputer.

High speeds This is used as a departmental "front end" to whatever mainframe is already in residence. The system works at very high speed—not always the case with development systems—and gives programmers an impressive range of tools to develop and test programs.

Nick Wenman, Maestro product manager within Phillips, sees it as a true IPSE—integrated programming support environment—developed long before the term itself became trendy.

"The real key in software development is documentation control, we see it as 60-70 per cent of the job," he says. The programmers workbench and the coding is a small part of the overall task.

"Often the so-called 'fourth generation' languages don't provide vital word processing services. Maestro pulls all services together, so that clerical and programming staff work on the same system. Real productivity benefits come when you start managing all these services on a team basis."

The integration of all development operations was one of the reasons GRE chose the "departmental" approach of Maestro, as against the widely accepted but less easily controlled route

of hanging Personal Computers off the mainframe.

"Maestro had a big impact on our word processing capability," says Lodge. "It made inroads on the analysis and removed a typing backlog almost overnight, because for the first time we could annotate diagrams and words."

The Maestro system gave its users in GRE a single-screen presentation of the specification, which was then turned into a Maestro-developed program. This in turn was transferred into standard Cobol statements to run on the mainframe. GRE also saved on its mainframe resources by writing its own code for distributing its mainframe code to Maestro for editing.

Maestro is expensive, but GRE has measured its success more in terms of effectiveness than in straight hardware cost. As a way of putting one terminal on everybody's desk, it is comparatively cheap. GRE estimates a 20 per cent increase in programmer productivity through this must be set off against hardware costs; even so it reports a net increase of productivity of 10 per cent.

"There's a very clear procedure right from the initial feasibility study for a system right up to implementation," says Lodge.

"We see it as enabling user-departments to react very fast to the ideas for new products presented by our business analysts, because they all talk the same language."

"Talking the same language," sums up the principle of IPSEs. Maestro's dedicated minicomputer approach is not cheap, or widely accepted (Phillips aims it at the top 500 companies).

But a measure of its success is that it has been specified by the government authority CCTA (Central Computer and Telecommunications Agency) as part of its Case campaign to cut software development cost by 30 per cent.

It will be used to support the Government standard system development, SSADM; Case stands for Computer Aided SSADM Environment. The briefing sets of initials do disagree on the idea, which is to find a lingua franca.

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YOU MAY NOT HAVE HEARD ABOUT OUR FINANCIAL CONNECTIONS.



Vertical text on the left margin: Philip, of, ch, DEALERS REQUIRED

Computer Software 9

Facilities Management

A market with growing potential

How one company cut computing costs by 40 per cent

ONE COMPANY which turned to facilities management of computer services five years ago was the Reliant Motor Company, specialist manufacturer of sports cars and three-wheelers. Farmer, Reliant maintained its own in-house data processing department, for accounting and parts control.

home management and support staff. As a specialist manufacturer, with a £15-16m annual turnover, Reliant felt that the kind of in-house data processing resources which existed formerly and employed 20 people, was difficult to justify.

New, at Reliant we don't require the analysts, programmers and back-up staff on our own payroll to keep the operation going," says David Meads.

Encouraged by the benefits achieved at Reliant, he has now set up facilities management contracts in other parts of Nash Industries, Reliant's parent company.

Bespoke Packages

Tailored to users' needs

THE UK software houses have been saved from the difficult task of becoming expert at product marketing by the advent of the fourth generation language.

Two years ago it looked as if packages would continue to pressure the bespoke software sector, cutting into its margins and its customer base.

Bespoke software, on the other hand was more expensive because it was a one-off job, being a unique system for that customer, had to be tested before it could be trusted.

Once a project was finished, it became a fashion in the software houses to sit down and try to turn it into a package, if there was a big enough potential market for it.

That, however, faced UK software houses with a problem. Instead of the one-to-one business relationship they were familiar with in the bespoke market they would have to offer a whole, matured opening option to handle the package side.

If there was one thing that UK software houses were not going to be able to beat the US vendors on it was marketing. Cleverly, technical skills and winning international bespoke business was one thing, but the UK software houses would face defeat at the hands of the US packaged software companies orientated towards marketing.

The sector figures seemed to bear this out. Year-by-year the growth of the package market was higher than the growth of the bespoke market.

The packages that proved successful came from both sides of the computing activity, for controlling the computer in its internal tasks and for a direct application such as payroll and ledgers. The most successful packages on the market, apart from the ones aimed directly at the ICL user base, all seemed to come from the US.

supplied by Cullinet, Cincom, NSA and the other fast growth computer package companies. Add to that the wave of US-written personal computer packages from Microsoft, Digital Research and the other suppliers and the picture looked grey for the UK software houses without a strong range of packages. It seemed as if they would be left with a show-stopper market where skills were at a premium.

Two years ago, however, the acceleration of the package software market began to slow. The market for package software, according to Mr Doug Evelyns, the director general of the Computing Services Association, is not growing at the rate many pundits say it is.

"The 1985 US market expansion is nothing outstanding at all and I am not sure the West European market is expanding as fast as they say," he says.

These concerns about the package market are reflected by many companies whose results recently have been lacklustre. John Van der Merwe, managing director of Midlands Software, says: "The large software houses formed in the middle 1980s, the era of batch, have been unable to keep up with the demand by the customer for new functions in the software."

The companies have made some attempt to try and catch up but, in many cases, are showing the strain, he says. They are still relatively new businesses who have not been able to gain the maturity of management necessary to change sufficiently quickly, he claims.

The current demand for software packages is higher for those that are based on using an interactive database or providing productivity tools for the job of systems development.

Another factor that probably slowed the growth of packages was the uniformity of packages.

The lower price of packages could only be achieved if every customer had the same product, leading to changes within the company to accommodate the technology. It might be a cheaper approach in the short run, but in the long run it meant that the services that the company provided to its customers, whatever they were, looked just like the services of everybody else using that package. The potential for gaining a competitive advantage through the unique use of computing is lost.

Fourth generation languages with the built-in methods of rigorous development and their higher productivity, open the way to programming without the need to know the individual computer system at a lower cost.

At the other end of the spectrum it is often difficult to see where facilities management begins and bureau work ends. This is to the advantage of the bureaux, some of whom are

NEW ENTRANTS over the past 12 months to the facilities management sector of the UK computer services market have revived a market that was in danger of falling to sleep.

Nobody can, however, quite agree on a definition for facilities management and nobody is quite sure how fast the market will grow in the coming 12 months.

In the past the classic definition of facilities management in the computer services sector was the taking over of responsibility for the computing services of a client. The computer and the staff to run it were managed by the facilities management provider. The customer just had to define what computing services they wanted and then rely on the financial relationship with the provider.

The major new entrant to the UK market, EDS, is challenging that definition. It is adding the integration of systems on a fixed-price contract for clients as a part of facilities management. For EDS, facilities management includes performing major implementation projects from beginning to end, from the specification of the business need to the training of the operations staff.

At the other end of the spectrum it is often difficult to see where facilities management begins and bureau work ends. This is to the advantage of the bureaux, some of whom are

using this blurring to change their profile in the market and get into more profitable activities.

With a definition as wide as the one EDS employs, John Hubert, managing director of EDS's UK subsidiary, puts the market at \$180m a year. The market research operation IDC Europa put the market at \$30m in 1985 for the UK and at \$1.56m for US-based vendors in world-wide revenues in 1985.

This definition is in EDS's favour as it puts a lot of business done by EDS into the facilities management sector that other companies would put in other sectors.

Another new entrant to the facilities management market in the UK, Data Networks, is a joint operation between London Regional Transport and Dupont Computer Services, a West Midlands-based computer services company.

Data Networks claims to have a turnover of \$10m from the business both sides brought to the venture on its foundation agreement. It is adding the integration of systems on a fixed-price contract for clients as a part of facilities management. For EDS, facilities management includes performing major implementation projects from beginning to end, from the specification of the business need to the training of the operations staff.

At the other end of the spectrum it is often difficult to see where facilities management begins and bureau work ends. This is to the advantage of the bureaux, some of whom are

of EDS has created a lot of awareness of the existence of facilities management, a service that few computer users have considered seriously because of the potential drawbacks.

In the first place the people most hostile to facilities management may be the professional data processing staff at the site where it should be considered. Secondly, some companies can not seriously consider allowing another company to run such a vital service as its computing needs, with all its confidential data in the system.

But the approach really appeals to the managing director or financial manager who decides they are not getting all they should from facilities management.

"If the current increases in salaries for staff in short demand goes on," Unwin says, "within a year or so IBM systems programmers will be paid more than the directors of small to medium manufacturing companies. Those directors will not put up with this and so turn to facilities management."

They, therefore, replace their own data-processing centre with a facilities management deal. Another force increasing the market for facilities management is the trend towards decentralisation in management structures; data-processing services follow this trend and so some subsidiaries within large corporations turn to facilities

management to get the job done.

Ray Davies, marketing manager at IMI Computing, pointed to the cost of software licences on large mainframes as one saving in facilities management's favour.

"Software licences are getting formidable. If you put all the systems on one site, you can get a lower price for the software from the vendor," he says.

Unwin believes that the biggest factor in the growth of facilities management is market awareness.

"There is not yet a very good awareness of the possibilities of facilities management at the level of the financial or managing director," he adds.

Hubert at EDS agrees, saying that the competitors in the market hardly ever met head-to-head in competition in front of a potential customer. "The only place that we meet head-to-head is in the government market or where people put it out to tender," he says. Hubert took this as a sign that there is a lot more in the market yet to be developed.

Unwin claimed that when BOC entered the facilities management market in the late 1970s it led to increased business for all facilities management companies. The present expansion will lead to the same, he adds.

The amount of competition in the market will increase

rapidly, EDS believes. Hubert expects to see Computer Science Corporation enter the market from the US to become the third major US vendor in the market. EDS is owned by General Motors and Hoskyns by Martin Marietta.

IBM and British Telecom will become big players in the part of the facilities market, as EDS defines it, that integrates total systems for customers.

"I expect, ultimately, some of the software houses will enter as well," he says.

Smaller UK companies are in the market and picking up business as part of an overall computer service portfolio. Recently IMI Computing, the computer services subsidiary of IMI, signed a £500,000 a year facilities management deal with Automotive Products to run AP's IBM mainframe.

This deal included taking AP through to a new generation of software for manufacturing systems. It is IMI's third facilities management deal, according to Davies, and he expects three or more like it in 1987.

Mike Hawthorne, sales and marketing director for Data Networks, claims that the facilities management sector is all about economies of scale. You need to be big to get the right level of staff so that customers can be supported by the variety of skills needed.

"We think only the large companies will survive in this

market. You have to have a certain amount of skill and facilities to keep up over the years and you have got to have a certain size of company to sustain these skills," he says.

This is the reason behind the deal between Dupont and LRT, giving Dupont a bridge into the south east and a large IBM mainframe facility in London. It will be the reason why other alliances may be formed in the near future to enter the market.

How far the market will grow is still debatable among the members of the sector. Hawthorne quotes a 15 per cent growth a year, a very respectable growth and in advance of many other sectors in the computer services industry.

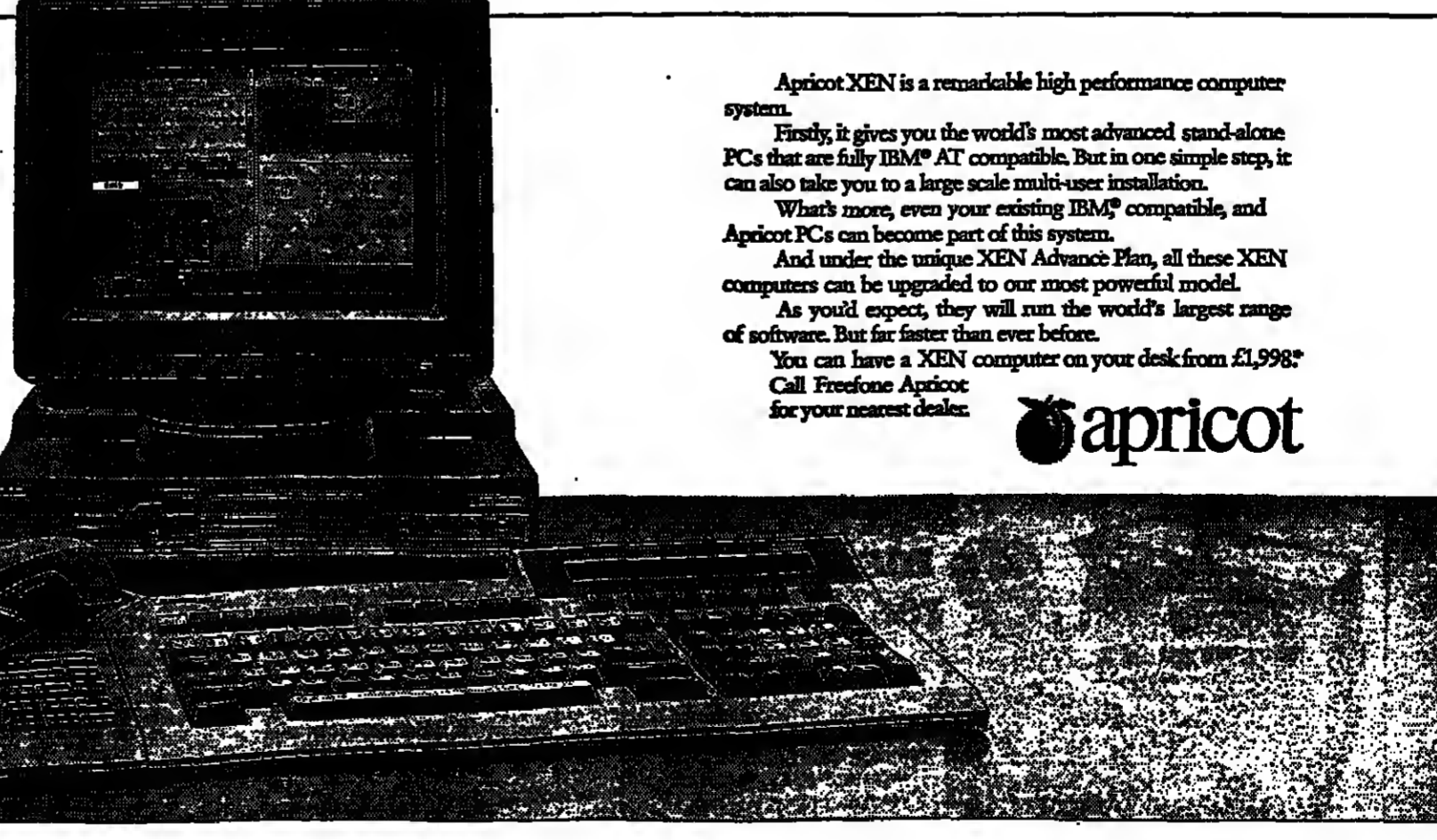
Unwin considers that the business will grow in advance of the whole services sector because each new facilities management contract signed brings a new client to the services sector. He quotes a growth of some 22 per cent and rising dependent on the awareness among senior management.

EDS is the bullish one, pushing for business with the financial and technical resources of General Motors behind it.

"The potential is very large indeed," Hubert says. "It is 50 per cent compound growth a year when you take the systems integration aspects into account."

Richard Sharpe

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Computer Software 11

The Future of Turnkey Projects

System wins wider popularity

THE IDEA of relying on just one supplier to provide everything from the software and hardware on a computer system to the services that connect it all together, has always held a certain attraction for users. Now as computers are put to ever more complex uses, this method of buying computer systems is gaining popularity among both large and small companies.

"There is a great future for the turnkey concept because the client wants to get on with his business and leave the information technology (IT) side to the experts," says David Andrews, a partner in management consultancy at Arthur Andersen, management consultants. "We're seeing much more of a business, particularly on behalf of larger organisations, to have information technology services delivered 'from scope to nuts'."

Turnkey projects have traditionally appealed to smaller companies which lacked the time or inclination to become involved in data processing to any great extent, but more and more they are becoming an option when large and sophisticated projects are in question. Because such jobs require a broader range of expertise and skills than many companies are likely to have on hand, hiring an organisation which has developed expertise in that area begins to look attractive.

"I see larger companies treating their computer departments very competitively. They are more prepared to go out and buy a solution from someone who has done it before," says Malcolm Warne, marketing and planning general manager at systems house, Scicon.

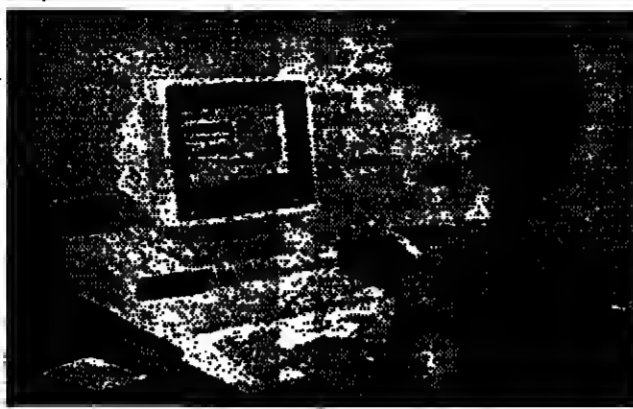
The difficulty and expense of finding and keeping data processing staff also weigh in on the side of turnkey suppliers. The tendency in the market to look for a third party for more rather than less help is burgeoning as part of the frustration that companies feel when they can't maintain what they've got because of a desperate shortage of staff, says Ronald Yearley, director of Business Intelligence Services.

This combination of factors points to healthy growth in this area of the software and services market. International Data Corporation (IDC), the market research group, predicts that sales of packages systems in the UK will grow by an average of 25 per cent a year to reach \$632m in 1991, up from \$186m in 1985.

The picture looks almost as bleak in the area of custom software, some of which would be expected to be used as part of turnkey projects. There, IDC shows \$178m in 1985 growing by 20 per cent a year to \$319m in 1991.

Western Europe in general shows much the same trends. Packaged software as part of turnkey systems was worth \$842m in 1985 and is expected to grow by an average of 27 per cent per year to \$3,504m by 1991, according to IDC.

Within this overall growth there are likely to be some changes in the nature of the turnkey projects. In the past many were done on a completely custom basis. When that began to prove too expensive the balance swung to the use of packages. But that approach



To some degree the success of turnkey operations will always rest with the customers.

did not always provide satisfactory solutions. Now a middle ground has been reached, with companies customising standard modules of software to meet the requirements of their customers.

"Lots of standard products will become building blocks towards and user systems that actually fulfil the client's need," says John Cadga, group divisional director at Fraser Williams, (London).

To some degree the success of turnkey projects will always rest with the customers. As it is many suppliers regard the term turnkey as misleading, since it conveys the impression that all the customer has to do is walk until he is presented with a key which will set the whole thing running.

"It is not as though they can place an order and leave it to

us. The sort of things we're doing couldn't operate on that basis," says John Leighfield, chairman and chief executive of Intel, which specialises in manufacturing.

"The customer needs to be deeply involved at the beginning, then during development there needs to be a continuing dialogue to make sure we're getting it right and to help them learn how to operate it."

Lack of understanding on both sides of what it takes to make a successful turnkey project has caused problems in the past. A review of government procedures has caused problems in the past. A review of government procedures has caused problems in the past.

Margaret Coffey

lems arose because users did not adequately define the problem that they were trying to solve, and then failed to recognise their responsibilities.

At the same time, contractors tended to underestimate the likely effort and cost involved. The working group that did the review has recommended steps to meet those difficulties.

Although such problems are true of non-government customers as well, turnkey suppliers expect the nature of the projects that they are taking on to mean that they will be working even more closely with their customers.

"Turnkey might not be right work in the future," says Dr Peter Partington, general manager for the public services sector at Data Logic. "A number of clients want to do more collaboration to get over a peak in the workload. They buy-in expertise, get the technology transfer, but know that their own staff will get the expertise to carry on developing it."

Software and systems houses expect to benefit as more competition along with it, as for the first time, hardware manufacturers move into this area. The software industry is confident that the experience that it has built up over the years will insure that it maintains its edge, however.

"What we believe will happen is that instead of turning to hardware suppliers in the first instance, customers will turn to systems houses to provide a solution," says Doug Evelyns, director general of the CSA.

The Computer Services Association, found that prob-

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Case study: how Anglian Water has combined operational expertise with computer systems expertise to monitor controls through a turnkey project.

The best of both worlds

WHEN THE Norwich Division of Anglian Water decided to set up a computer system to monitor a variety of measurements, such as water levels, sewage treatment and other levels at 1,000 sites, it chose, to do so, through a turnkey project.

The basic reasoning behind that approach was simple, recalls Jim Adams, general manager of the Norwich Division. "We wanted to take advantage of the latest technology. Our business is water. We're not computer designers. We're users."

So it seemed sensible to call on a company which had experience in the area of remote metering, or telemetry, to provide the system.

The fact that Anglian Water lacked the staff to take on such a project, also played a part in the decision. "It was not a realistic possibility to design the whole system in-house," says Mr Adams. "We could have employed people for the project but what would we do with them now?"

These considerations alone did not dictate a turnkey approach. Anglian Water could have hired a consultant and then contracted various parts of the project out to different suppliers. But it rejected that possibility because, says Adams, "We wanted to be able to put the whole responsibility under one firm. We wanted to be able to say you provide the equipment, the software, the radios, the building work. Our dialogue will be with you."

Once it had decided on the overall approach, the Norwich Division prepared a detailed specification of what it wanted the system to do. It was looking for a system that would provide continuous monitoring of plant and equipment at 1,000 sites, many of them remote and unattended.

Through the use of radio, public switched telephone network and private circuit links, it had to trigger alarms if there was any deviation from the norm. So if, for instance, a burst main emptied a water tank, a message would flash up on the screen of a divisional manager in minutes.

Norwich Division also wanted a system which was flexible enough to run either from its control room or from one of its district offices or any combination of those possibilities, and that could send information to the outstations as well as receive it. It wanted to use the information gathered to provide water consumption and operational statistics.

Within that overall brief, some parameters were set. The division wanted the system based at its headquarters in Norwich, set the figure of 1,000 out-stations and knew when it wanted the three radio scanners integral to the system located. "It is a feature of turnkey projects that you often send out a document a couple of inches thick and get another document back of equal thickness telling you what they have allowed for," says Mr Adams.

Anglian invited companies that specialised in a variety of areas ranging from instrumentation to software to tender for the contract. Simply selecting that short list required a good

deal of groundwork. "We did go through a fairly extensive vetting of the firms available beforehand," he says. "With turnkey deals you've got to 'do the homework' out to understand that a company can produce what you want."

Norwich had begun its feasibility study in 1982. By the end of 1983 it had awarded the contract to Logic, the one of the project to Logic, the UK software and systems house. Logic already had experience in providing telemetry systems so it was able to offer standard hardware as a basis of the system that Anglia specified.

Logic installed the computers systems and software to run 200 outstations, a project worth £2.5m, by June of 1985. It is now working on phase two, a contract worth about £1m which will add another 250 to 300 outstations to the system.

Anglia is pleased with the way the contract has gone. "It was something of a departure to use a software house for telemetry," says Jim Adams, "but now that we've got the first phase up and running we can say yes it was the right approach."

The fact that Logic was providing the system as a turnkey project and that there were enough of the company's employees on site to justify setting aside an office for their use, did not mean that computer staff at the Norwich Division could sit back, relax and wait for things to happen. "You need to work closely together," he adds. "It is possible for somebody to say give me that and I'll come back when you've done it, but we just don't operate that way."

In fact, while the project has been running the Norwich Division has doubled the size of the systems staff. "These people are needed to run and maintain as it is installed. They were also crucial to its development. Logic installed the hardware and software but the Norwich division had to supply all the information with which the system was to work."

"We had to create a series of 2,000-odd pictures that give us all the information that we need," he says. "In-house staff were also necessary to supervise the project. We needed those people to make sure that we were getting what we needed," says Mr Adams. "Not that Logic would seek to do otherwise, but you don't want them to do a lot of work and you to incur a lot of expense and then discover that it doesn't do what you want."

Both sides have successfully completed their sides of the first phase of the project, with the result that Norwich now not only has an alarm system integral to the system management tool.

Now as much as ever, Mr Adams is convinced that a turnkey project was the best way to achieve the results Anglian Water was looking for. "Logic has the systems expertise, we've got the operational expertise and we think that a turnkey contract is the best way of securing a marriage between the two."

Margaret Coffey

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Computer Software 12

Development of Consultancy Services

Moving on to centre stage

"STRATEGY" is a key term in today's software industry. Every company is terrified of being caught in an uncontrollable systems avalanche of missing out on market opportunities, of getting trapped in a backstream where their computer services are isolated, uncommunicado, because no one took a long-term view when planning in-house systems.

Programming services have moved to the centre-stage of many large corporations. The paranoia about strategy is justified, especially where large companies support dozens of departmental computer facilities which have grown up without any reference to the all-powerful central mainframe. The problem is magnified in multi-national operations. Where data processing used to be a parochial concern, it has now become everybody's business, as vital to operations as transport or telephones.

In some organisations, such as banks, the range of services they are able to offer is actually defined by the power and flexibility of their computer services. The "hole-in-the-wall" cash dispensers provide one highly-visible example of a service made possible by computers.

The deregulation of services in the City known as the Big Bang is a more far-reaching example of how outside factors have forced large organisations to overhaul their computer services with one eye on present profit, and another on long-term market position.

"Consultancy" used to be a fairly easy area to define in the context of software. It meant that computer users of all levels, from the first-time Personal Computer user to the mightiest of multinationals, bought in specialist expertise to help them make a specific decision about a system.

The word "services" expands the field: consultants no longer talk of individual data processing projects and systems. They have grown with the computing services industry and now claim to offer complete planning services.

These are as much to do with management as they are with computing; in fact the aim is to encompass every aspect of the company's business, from turn data processing from a cost centre into a competitive tool. This often involves inter-national "harmonisation" of computer services, a job which

demands an impartial view, and can be done better by an outside consultant.

In the case of international computer giant EDS, General Motors took the company over and then handed over its entire data processing operations to EDS, said to be the largest computer organisation in the world. GM saw this as the most reliable way of enforcing an integrated, international service. EDS also persuaded Unilever to lop off its own computing services and hand them over, lock, stock and barrel, so that the consultancy has become a sort of computer services caretaker and overseer.

"We're anxious to raise our profile from the strictly technical both in the UK and internationally," said Mike Watkins, business development manager of Logica Consultancy Ltd. Companies such as Logica and, in the same bracket, CAP, have, nevertheless, had to rely on their technical background to carve out an international niche.

Integration

Watkins uses the word "integration" to describe the support of clients' operations across different countries, different computer kits, and under an unpredictable variety of government laws and regulations on such factors as communications.

"Long experience in international operations gives us an edge over the newcomers," he says.

On a less grand scale, many of the "strategic" decisions made by major companies centre on a database environment, or the choice of an "integrated" applications environment. This has become a management concern, rather than a purely technical matter.

The traditional "mainline" computer consultancies, such as CAP, Logica, SDL, Hoskyns, and BIS, have always stressed management as the key to successful computer implementation, but they are now facing competition from the large accountancy firms.

Many computer companies back up consultancy services with structured design methodologies, developed over several years, such as GACI's structured methodology, and Hoskyns' Prism. But the "Big Eight" audit and financial consultancies, including Arthur Andersen, Deloitte Haskins,

Arthur Young, and Price Waterhouse can claim to offer similar design and methodology services. In recent years they have put a foot in the door by offering strategic studies and reports for major clients.

So far they've made a good business out of selling advice, but their entry into a lucrative market is viewed askance by the traditional computer companies.

One independent consultant complained that the audit firms "charged the earth for comparative database studies—about £100,000—then left the client to make the final decision and implement it."

In the meantime the traditional consultancies can still capitalise on their technical background. Nick Rakusey, Edinburgh-based, long-term strategy studies from their audit business, nor give impartial advice.

"We do not believe that the large IT consultancies could come up with a radical or novel computer solution for fear of rocking the audit boat," says Mike Brodell of DCE Computer Consultancy. DCE started small in Holland, but grew with such customers as Royal Dutch Shell, and now has branches in New York, and the UK, where it is researching the effectiveness of information management in a joint project with the Cranfield Institute.

Last month, the possible conflict of interests between the auditing and consultancy in the large accountancy was raised in a consultative document published by the Department of Trade and Industry in the wake of EEC directives.

It is likely to broaden the discussion, and if the DTI finds

evidence of abuse of privilege, it may well force the firms to lop off their consultancy arms.

In the US, a similar enquiry is proceeding under Justice Dingell, but few have hopes of a prompt conclusion.

The Big Eight are capable of just defence, especially when charged with inexperience by the computer specialists.

"No-one's been in the software business longer," says David Andrews, a partner at Arthur Andersen. "We've been implementing systems since 1957, so it's ill-informed and presumptuous to suggest we are inexperienced. As for the audit advantage, we see it as neutral; between 5 per cent and 10 per cent of our business comes from the audit side. People come to us because of the breadth of

our experience, because we have industry-related skills, and we tackle business problems."

The hard sell used by consultants is that they, with their specific computer expertise, can tell a company more about its computer operations than the company itself has time to find out.

The "service" philosophy is summed up by Brodell of DCE: "Increasingly, information systems and technology needs to be directly supportive of a corporation's business strategy. Our duty is to make sure that computer services are directly associated with the business, to make it more effective, more competitive, and where possible, more profitable."

Margaret Coffey



At Leamington Spa Building Society, database information is entered direct from remote dictation. Typists, once deployed in various departments, now operate in a centralised word processing secretariat, using a Dictaphone centralised word processing system to boost office productivity.

Micro-mainframe links

There are no magic solutions

TO THE untutored, the task of linking a microcomputer to a manager's desk to the company mainframe might not look very daunting; the exchange of information is, after all, what computers are all about. Add to that the fact that there are numerous products that advertise themselves as micro-mainframe links and it is hard to see where the difficulty lies.

But although such products have been around for some three years now, it is still a confused market, with the result that many companies are still finding that forging links between their micros and their mainframes is something that is easier said than done.

"At the moment only about 25 per cent of the market is genuinely extracting data and using it in local applications. It's a long, hard road," says Dr Stephen Norman, managing director of Direct Technology, a company whose Automator product is designed to simplify micro-to-mainframe links. "The biggest problem is not the technology, but getting people to use it because they find it bewildering."

The reason for this is fairly straightforward. "Connecting two pieces of equipment together is very, very simple,"

says Richard Dearman, commercial manager at dealer First Computer. "Getting data backwards and forwards is very, very difficult."

Because personal computers are a relatively late arrival on the data processing scene, the information technology strategies that have evolved at many companies are not designed to comfortably accommodate them. As a result, the users who want the information often find that instead of the simple press of a key that they imagined a considerable effort is involved. Even when the data arrives it often comes in an unfamiliar form because when the system was set up no one envisaged that it would be put to such a use.

That means work for the data processing (DP) departments, many of which are wary of micro to mainframe links because they do not want to lose control of the information resident in the mainframe and because they see them eating up a lot of precious processing time. If a company uses equipment from a variety of manufacturers the problems can be mind-boggling.

The companies that supply micro to mainframe links have come up with a host of products designed to solve these prob-

lems. "Everyone's getting in on the act," comments David Finn, principal consultant at information technology consultancy Butler-Cox. "The data processing department has to cut its way through a lot of possibilities."

But unfortunately for the purchaser, the term micro-to-mainframe link covers a multitude of products, some of which have about as much in common as a bicycle and a Rolls Royce. At the most basic end of the spectrum are the devices that make a mainframe computer think that a PC is one of its own terminals. On their own, these are not much use to a user who wants to put information held on a file on the mainframe onto his spreadsheet because they do not deliver the information in a familiar form.

The next step up are file transfer packages which actually move files down to the PC, but since those files were designed for mainframes they may not be of much use to the PC user either.

Products that fall into these categories are likely to require a good deal of work from the DP department to put information into a usable form for the end-user. Suppliers, aware that friendliness is becoming a

priority, have come up with more sophisticated products that aim to do some of that work automatically. Some products such as the Answer Series from Sterling Software International and FQS (Friendly Query System) from Thorn Emi Computer Software fall into this category.

There is a further division within these groups. Some products, such as Goldengate from Cullinet and Expert Link from MSA, only work with specific software on mainframe computers.

Those products tend to be mainly concerned with getting information from the mainframe to the PC. Another group has been designed to move data from PCs onto the mainframe. Based on the notion of a "virtual disk" products such as Tempus Link create what looks to the PC like another disk, but is, in fact, a file on the mainframe.

"It gives you much more flexibility," says John Paton, UK marketing manager for Thorn Emi Computer Software. "It gives you more drive on your PC and it allows data to be shared by other people."

Other companies are adopting this method. McDonnell

Douglas Information Systems, for instance, has used it in its new product, RealLink, designed to connect IBM PCs or close equivalents to its mainframes.

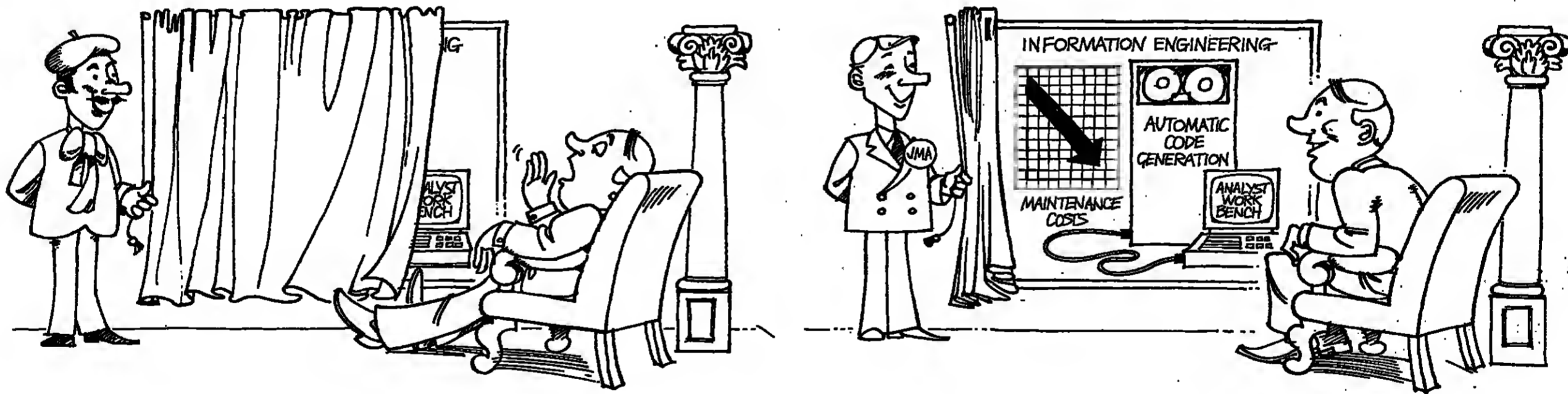
None of these products provide magic solutions. "It's a case of linking building blocks to provide comprehensive solutions," says Bruce Coward, chairman of Computer Marketing Associates, a company that specialises in communications.

DP departments which want to hook up micros after the fact have got to decide how much effort they are willing to invest before they select a product. And when it comes down to it, the dictates of their system may well mean that despite the large number of products available there is not a lot to choose from.

"We didn't have a great deal of choice because most of the products were not what we wanted," says Neil Rogers, systems manager at pharmaceuticals company Warner Lambert. "Most of them wanted the MIS department to do a lot of work which sort of defeated the purpose of getting a micro to mainframe product."

Claire Gooding

The James Martin Associates answer to D.P. Productivity



Can you wait for the unveiling?

JMA can promise the happy MIS manager shown in the righthand picture that he will stop losing his hair when he sees what the Group can do for his organisation today.

The Analyst Workbench Field is one notoriously over promised and under delivered" wrote a well-known British journalist in the Computer press recently. This applies to the 4GL productivity environment as a whole.

Those of us old enough to remember Bob Hope starring in "Paleface" will recognise the problems. Progressing through a Saloon to face the fastest gun in the West, he received different advice with every step. As he exited through the swing doors trying to follow all the different advice - his trousers fell down.

The recent AT Kearney report differentiates between "leading edge" and "lagging" companies through their use of Information Technology. Leading edge companies are all concerned with the use of new methods for system development.

What should these organisations be looking for and what is available now?

The JMA Group of Companies provide immediate solutions. The Group is taking a large number of leading edge companies along a clearly defined route into the foreseeable Fifth Generation.

Information Engineering

JMA's Chairman, James Martin and Clive Finlayson coined this generic term in 1981. Ian Palmer, the JMA Group Technical Director is well known by methodology experts as "the father of Entity Modelling" which he developed in 1974. The JMA Group has built upon this unique expertise and fully developed a methodology with automation as the byword. Ian Palmer has worked with James Martin on the "how to" rather than the "what".

Only from JMA is a full set of methodology guides to all aspects of Information Engineering available. These guides distil the consolidated expertise of JMA's one hundred

and fifty plus professional consultants and represent hundreds of man years of project management experience.

The Misconception

It is falsely believed that Information Engineering forces an organisation to change current methodology uses. It can be as readily used by advocates of Yourdon, IBM's Jackson, Warnier Or or any other methodologies.

The JMA Information Engineering Methodology has been adopted by three of the world's major computer manufacturers and one of the Big Eight accountancy groups. JMA consultants have successfully installed this system development methodology in more than one hundred of the Fortune 1000 companies.

Costing Maintenance Costs

One of the biggest single inhibitors to new development of systems which are geared to provide information to help run the business, is the high percentage of the DP budget which is spent in maintaining out of date Cobol programs.

JMA can show you the picture now!

One of the cries that JMA hear so often in carrying out many Strategy Planning projects for major corporations is "what on earth do I do with my current huge investment in Cobol operational systems?"

JMA have automated tools available which fully re-structure Cobol systems and are showing users savings of between 20%-40% of maintenance costs. They may be used in-house or on a service basis.

A Workbench

As it stands now, a Workbench is the tip of the iceberg. It is difficult to justify huge productivity gains in the analysis stage, when the resultant product does nothing to clear the application backlog. Logically, the faster the analysis, the more the application backlog builds up.

Without the immediate knowledge that code generation is available, leading edge companies must be wary of the courses they are steering. Unfortunately, whilst we continue to see an incredible decrease in the price of

hardware, response times still remain a problem. Consequently, the escalating cost of people and paper convinces to mean that performance problems will never go away.

The environments that JMA look at now anticipate that project teams of twenty plus people will be developing large online computer systems without the immediate availability of mainframe dictionary encyclopaedia capabilities. Without the certain knowledge that this co-ordination vehicle is both available and comprehensive enough to manage both the size of the project and the intricacies of code generation, potential purchases must beware.

Today JMA can provide these benefits from existing, proven technology.

Code Generation

JMA's code generation facility which is already providing between 43 and 85% productivity gains in some of the world's leading corporations (and has been chosen by a leading international computer manufacturer)

is available now - what more can be said?

Knowledge Engineering

So JMA has the facilities now and in partnership with one of the most innovative computer manufacturers in the world, the Group is achieving large productivity gains with leading edge companies now. These organisations are confident that JMA will take them into the world of artificial intelligence with maximum practicality.

Under one of the largest AI contracts issued by Esakt, JMA are building a complete AI environment for the production of a new generation of computer systems to keep them ahead in the late 80's and early 90's. All JMA clients will have access to that advanced technology.

A day's viewing of the full picture must be an investment worth making. Why not contact your local JMA office and speak to the world's leading Information Engineers?

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